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MITSUBISHI CK-36310 OWNER'S MANUAL

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MITSUBISHI

CS-32309
CS-36309
CS-40309
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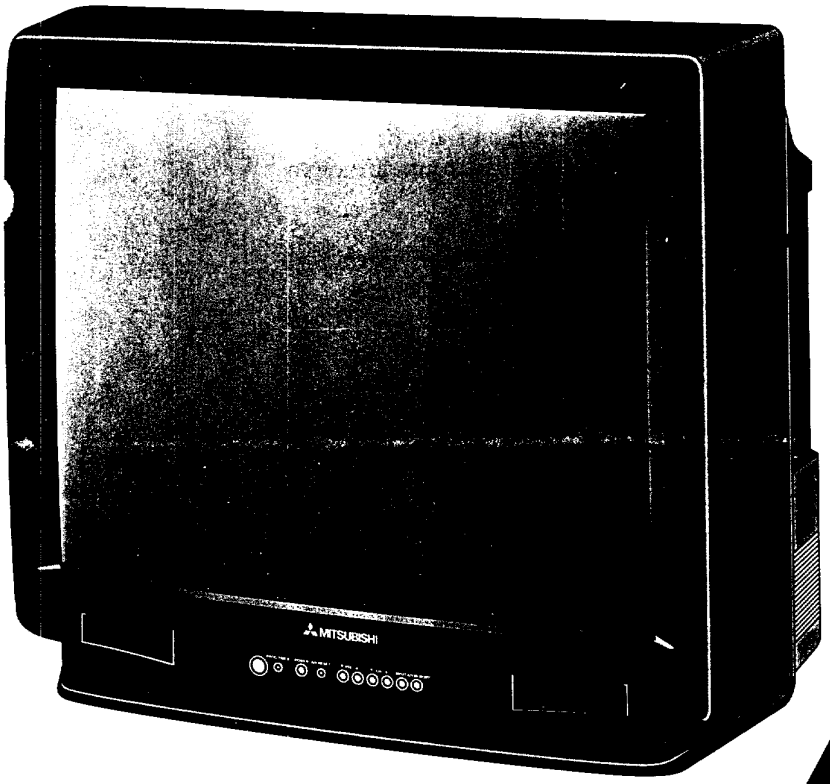
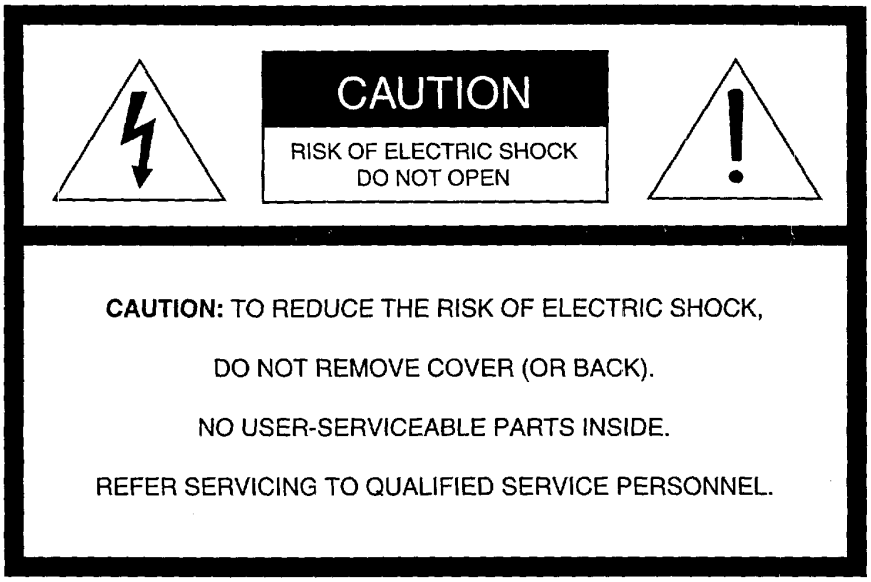
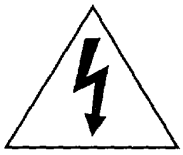
CK-36310

Television Owner's Guide




CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

▶**Warning:** Don't leave stationary images, such as stock market reports, video games, station logos, or the TV's displays, on-screen for more than 10 minutes. Still patterns such as these can scar the picture tube, causing permanent damage to the TV.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO PREVENT ELECTRIC SHOCK HAZARD, DO NOT USE THIS UNIT'S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTE TO CATV SYSTEM INSTALLER:

THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.

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IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR TELEVISION SET AND RETAIN FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE TV RECEIVER.

1. **Read Instructions**
   Read all safety and operating instructions before operating the appliance.

2. **Retain Instructions**
   Retain the safety and operating instructions for future reference.

3. **Heed Warnings**
   Adhere to all warnings on the appliance and in the operating instructions.

4. **Follow Instructions**
   Follow all operating and use instructions.

▶ **Warning:**

5. **Cleaning**
   Unplug this TV receiver from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Cleaners can permanently damage the cabinet or screen. Use a damp cloth for cleaning.

6. **Attachments and Equipment**
   Never add any attachments and/or equipment without approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

7. **Water and Moisture**
   Do not use this TV receiver where contact with or immersion in water is possible. Do not use near bath tubs, wash bowls, kitchen sinks, laundry tubs, swimming pools, etc.

8. **Accessories**
   Do not place this TV receiver on an unstable cart, stand, tripod, bracket, or table. The TV receiver may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the TV receiver. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. **Ventilation**
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the TV receiver and to protect it from overheating. Do not block these openings or allow them to be blocked by placing the TV receiver on a bed, sofa, rug, or other similar surface. Nor should it be placed over a radiator or heat register. If the TV receiver is to be placed in a rack or bookcase, ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

10. **Power Sources**
    This TV receiver should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

11. **Grounding or Polarization**
    This TV receiver is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

12. **Power-Cord Protection**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. **Lightning**
    For added protection for this TV receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the TV receiver due to lightning and power-line surges.

Important Safeguards (cont.)

14. Power Lines
An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

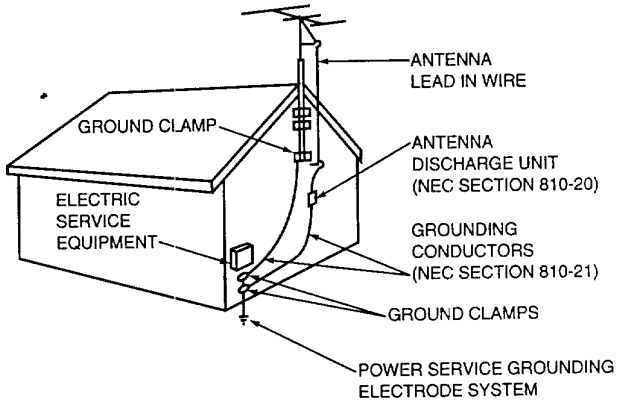
15. Overloading
Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

16. Object and Liquid Entry
Never push objects of any kind into this TV receiver through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the TV receiver.

17. Outdoor Antenna Grounding
If an outside antenna or cable system is connected to the TV receiver, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

NEC — NATIONAL ELECTRICAL CODE

18. Servicing
Do not attempt to service this TV receiver yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. Damage Requiring Service
Unplug this TV receiver from the wall outlet and refer servicing to qualified service personnel under the following conditions:
(a) When the power-supply cord or plug is damaged.
(b) If liquid has been spilled, or objects have fallen into the TV receiver.
(c) If the TV receiver has been exposed to rain or water.
(d) If the TV receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV receiver to its normal operation.
(e) If the TV receiver has been dropped or the cabinet has been damaged.
(f) When the TV receiver exhibits a distinct change in performance — this indicates a need for service.

20. Replacement Parts
When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

21. Safety Check
Upon completion of any service or repairs to this TV receiver, ask the service technician to perform safety checks to determine that the TV receiver is in safe operating condition.

▶Warning:
Do not leave stationary images, such as stock market reports, video games, station logos, or the TV's displays, on-screen for more than 10 minutes. Still patterns such as these can scar the picture tube, causing permanent damage to the TV.

Welcome to Mitsubishi

Congratulations on your purchase of this Mitsubishi TV. Your TV is designed for superb viewing pleasure as well as continued reliability.

To familiarize you with your TV and owner's guide, we suggest that you read through the preface, which provides the following important information:

- **Summary of Special Features**
- **Unpacking Your TV**
- **What's in Each Chapter**
- **Some Conventions Used in this Guide**

Mitsubishi has strived to create your TV so that it will bring you years of viewing enjoyment. Similarly, your owner's guide is designed with a "user friendly" philosophy that will help you take advantage of all of your equipment's features.

Once again, thank you for selecting our product and welcome to Mitsubishi!

♦ Summary of Special Features

Your top rated Mitsubishi TV delivers these special features:

- **181-Channel Capacity** --- programs up to 181 channels (either 68 antenna channels or 125 cable channels).
- **Two-Speaker Sound System** --- a special speaker system that produces clear stereo sound.
- **Expanded Sound Capability** --- allows you to connect the TV to an external audio system for enhanced listening pleasure.
- **Remote Control with TV/VCR/DVD/AUDIO Control** --- uses a single remote control transmitter to operate the TV, selected Mitsubishi VCRs, DVD player and audio components, as well as certain VCRs, cable boxes, and satellite receivers from other manufacturers.
- **Digital Dynamic Comb Filter** -- creates a smooth, continuous picture texture by comparing the individual scanning lines with those directly above and below.
- **On-Screen Displays** --- appear whenever you adjust your TV, showing you the status of its various functions.
- **ViewPoint® On-Screen Operating System** --- simplifies the TV's features with easy-to-follow instructions.
- **Closed Caption Decoder** --- decodes hidden text information included with TV programs and displays the text on-screen.
- **Extended Data Services** --- (also known as "XDS,") allows broadcasters to supply you with channel information, program information, and the time of day. You can display this information on-screen.
- **Picture-in-Picture Mode** --- allows you to view two different live pictures at the same time.

Each of these features will be explained in more detail in Chapter 3, "Operating Your TV," and in Chapter 4, "Using the Special Features."

♦ Unpacking Your TV

What you will find

As you unpack your new TV, please check to be sure that the following items are included:

- an owner's guide containing a warranty
- a registration card
- a remote control transmitter
- a set of two AAA size batteries for the remote control

A few suggestions

Before you hook up your new TV, please take a few minutes to:

1. Complete the registration card. The registration card asks for the TV's serial number, which you will find on the back of the unit.
2. Keep the box and packing materials for future use.
3. File your sales receipt.
4. Place the TV on a stable surface with sufficient lighting to do the hook-up.

♦ What's in Each Chapter

Here's what you will find in this owner's guide:

Chapter 1, "Getting to Know Your TV," introduces you to the location and functions of the buttons and controls of your TV.

Chapter 2, "Connecting Your TV," explains how to connect a VCR, antenna, cable box and other equipment to your TV.

Chapter 3, "Operating Your TV," provides the step-by-step instructions you need in order to use your TV.

Chapter 4, "Using the Special Features," explains how to use the special features of the TV.

Chapter 5, "Troubleshooting," summarizes the problems you may have along with suggestions for remedying these problems.

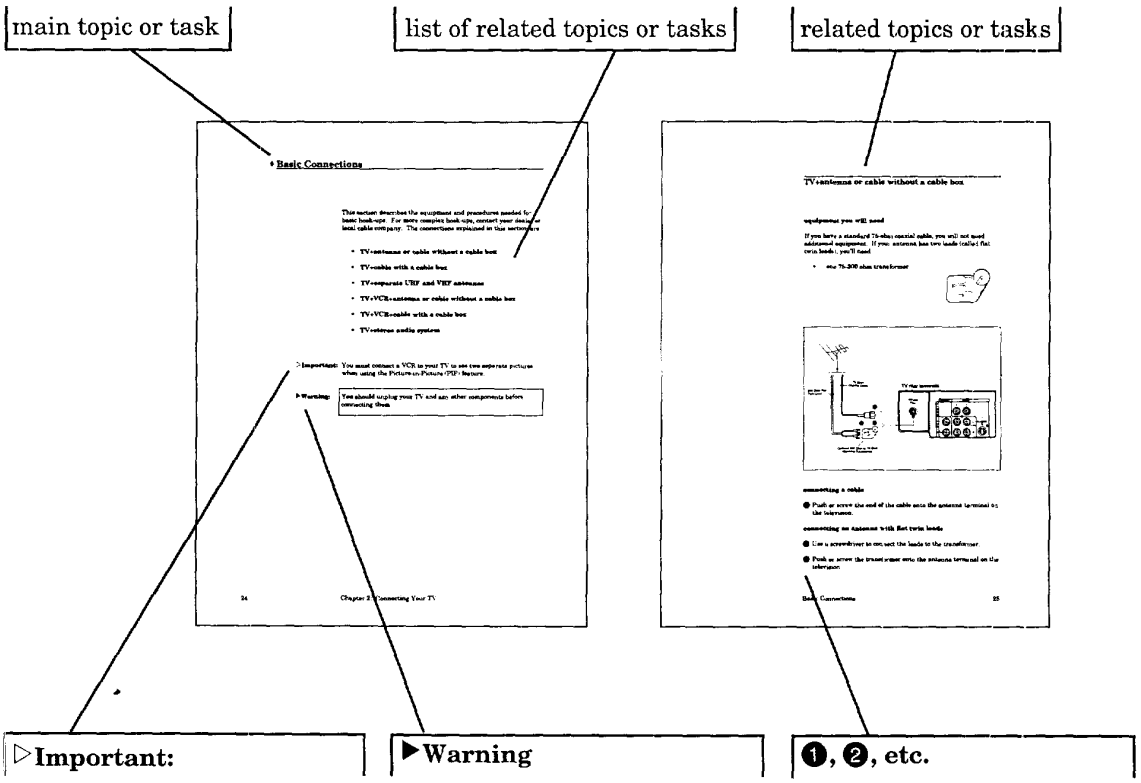
The appendix explains a procedure for bypassing the parental lock.

You will also find a detailed index at the back of the book.

♦ Some Conventions Used in this Guide

Mitsubishi has gone to great effort to provide you with an easy-to-follow, useful owner's guide. You will find that different types of information are treated in different ways.

You should read information labeled **Important** and information that is boxed and labeled **Warning**. The owner's guide uses these terms sparingly, and you should carefully read all information highlighted in this manner.



▷Important:

This cue indicates information critical to the operation of your new TV.

▶Warning

This cue alerts you to information describing dangerous situations that could ruin your equipment or cause electrical shock.

❶, ❷, etc.

The step-by-step instructions on how to accomplish a particular task are signaled by white numbers on a black background.

CHAPTER ONE

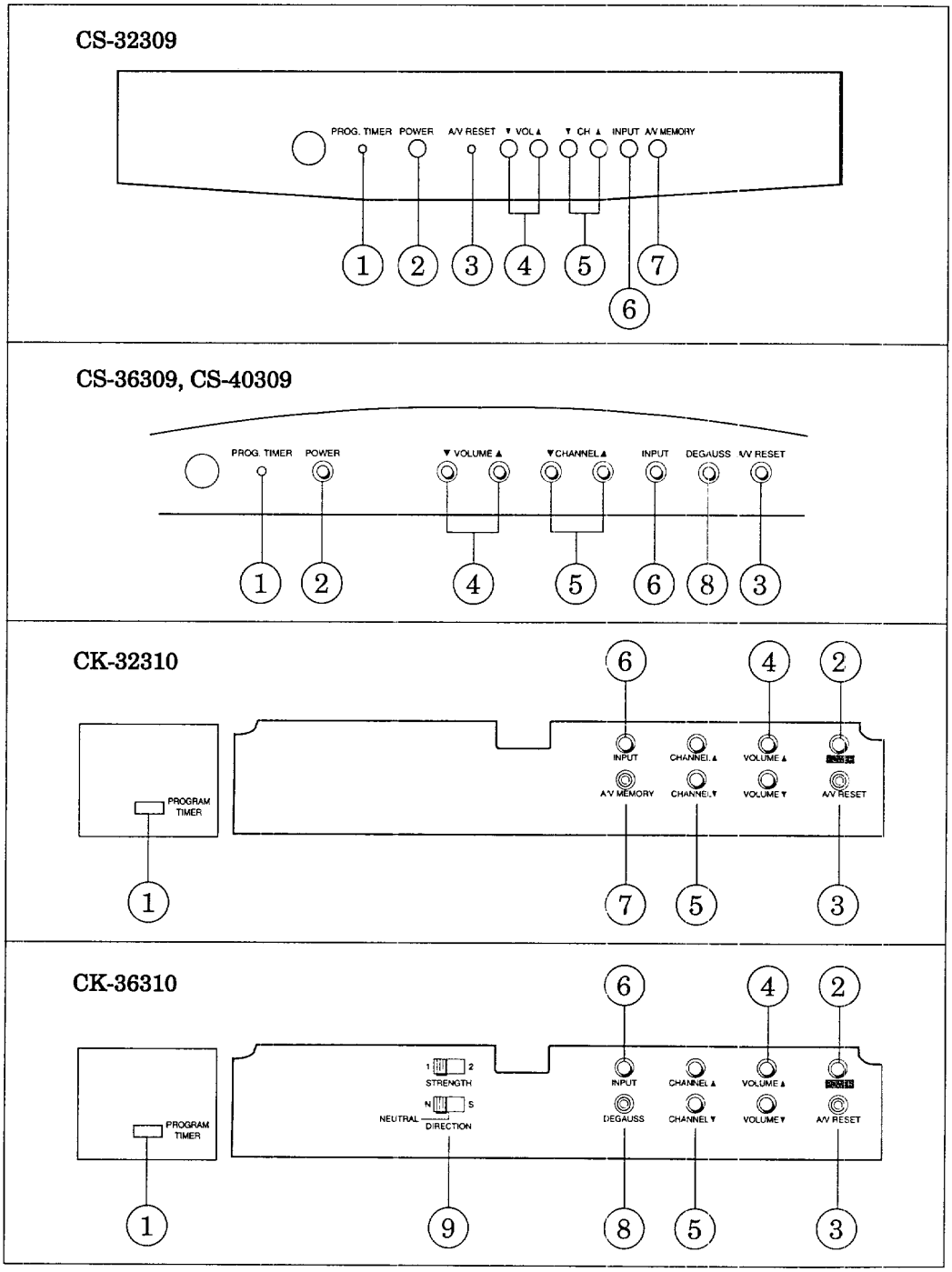
Getting to Know Your TV

Now that you have unpacked your TV, read through the safety information, and glanced at the overview explaining how this owner's guide is organized, it's time to become familiar with the buttons and controls you will be using when you operate the TV. This chapter will introduce the range of options available when using the buttons on the remote control or on the TV's front panel. It also offers some general guidelines for using the remote control.

Most functions can be controlled by using either the front panel or the remote control, but certain specialized functions require the use of one or the other. This chapter, which will familiarize you with the full range of button functions, contains the following sections:

- **Overview of the Front Panel**
- **Overview of the Remote Control**

♦ Overview of the Front Panel



① **power/program timer indicator**
This indicator lights up in green when you turn the TV on; it blinks in green when the timer is set and the TV's power is off.

② **power button (POWER)**
Use to turn the TV on or off. When you turn the TV on, the power indicator will light in green.

③ **A/V reset button (A/V RESET)**
Press to reset all audio and video functions to their normal level or setting except for volume, the "Listen to:" function (Stereo/SAP/Mono), speaker (off/on), and closed captioning.

④ **volume controls (VOL, VOLUME)**
Press the ▲ button to turn up the volume and the ▼ button to turn down the volume.

⑤ **channel controls (CH, CHANNEL)**
Use the ▲ button to switch to a channel with a higher number and the ▼ button to switch to a channel with a lower number.

⑥ **input button (INPUT)**
Use to select the input source you wish to watch:
- TV channels
- The sources connected to Input 1 and Input 2

⑦ **A/V memory button**
Press repeatedly to switch the A/V memory positions of Standard, Music, Movie or News. (Models CS-32309, CK-32310 only)

⑧ **degauss button (DEGAUSS)**
Use this button to correct color impurity. (Models CS-36309, CS-40309, and CK-36310 only)

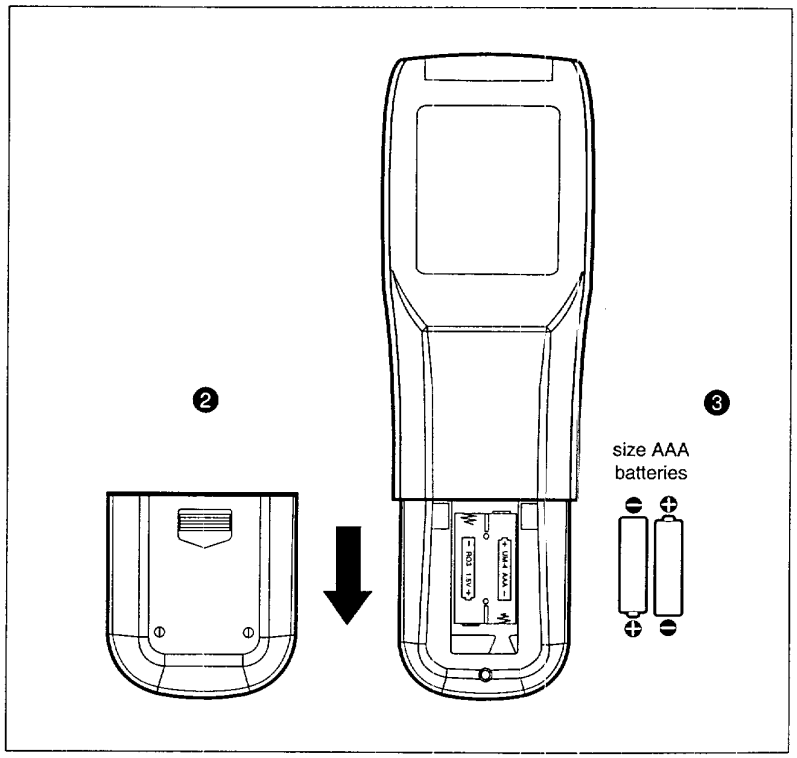
⑨ **color purity adjustment switches**
Set these switches according to the placement and position of your TV. See "Adjusting the color purity" in Chapter 3. (Front panel of model CK-36310 only. Also, found on rear panel of models CS-36309 and CS-40309. Not available on models CS-32309 and CK-32310.)

♦ Overview of the Remote Control

Getting ready to use the remote control

installing the batteries

1. Take the two AAA size batteries from the packing bag.
2. Remove the back cover of the remote control by pushing the tab in the direction of the arrow and lifting off the cover.
3. Load the batteries as indicated in the illustration, making sure that they are positioned correctly (+ to +, and – to –).
4. Replace the back cover of the remote control.



For best results, use Duracell* AAA (MN2400) batteries.

**Duracell is a registered trademark of Duracell, Inc.*

some do's and don'ts

To ensure that your remote control will continue working properly, follow these guidelines:

- Don't press two or more buttons at the same time, unless you are specifically instructed to do so in this owner's guide.
- Don't allow the remote control to get wet or become heated.
- Avoid dropping the remote control on a hard surface.
- When cleaning the remote control, don't use any harsh chemicals. Use only a soft, slightly moistened cloth.

general instructions

When using the remote control to operate the TV, VCR, or cable box, follow these procedures:

1. Be within 20 feet of the desired equipment.
2. Point the tip of the remote control toward the equipment.
3. Press the appropriate button or sequence of buttons.

guidelines for using batteries

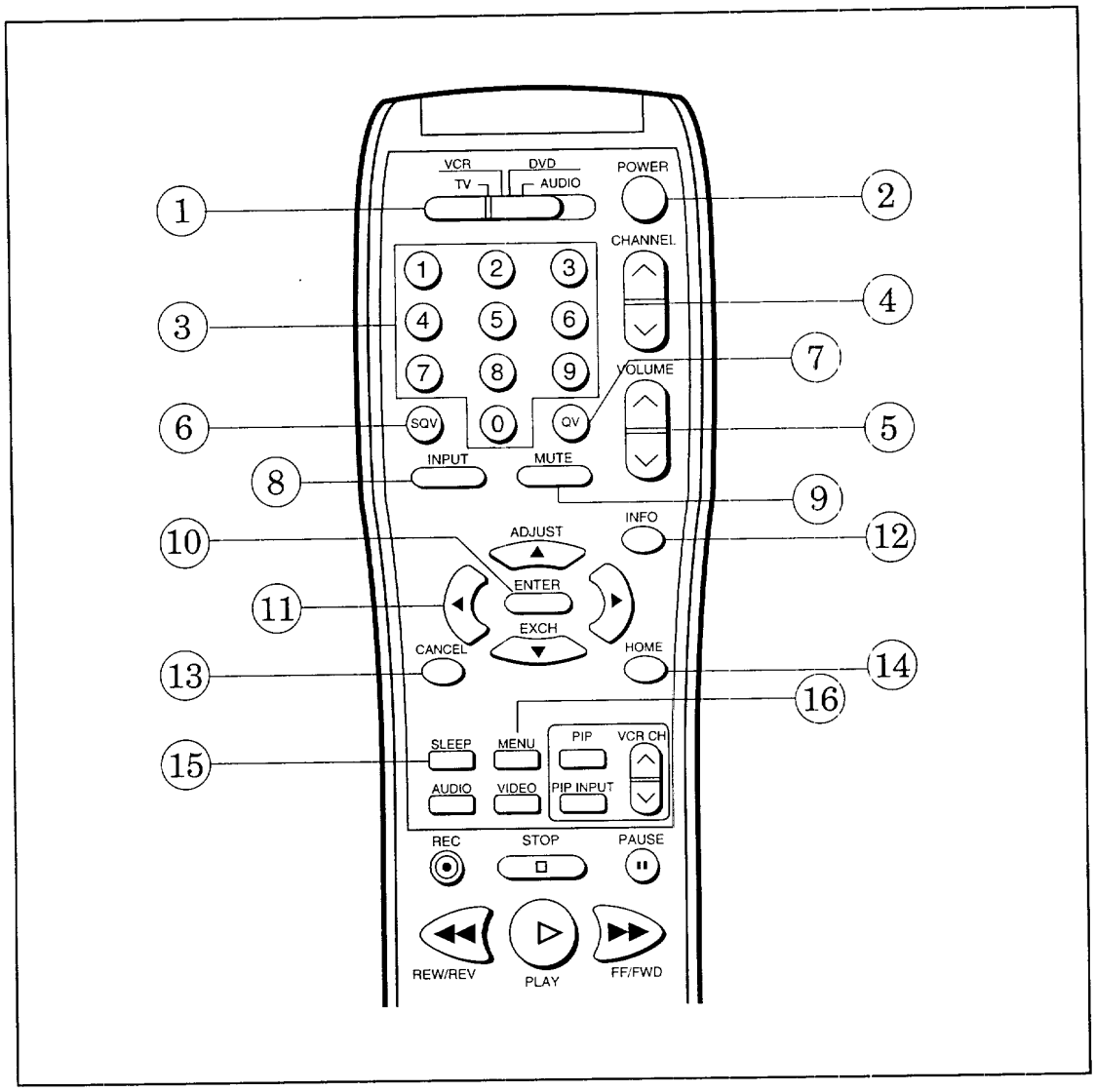
- Don't use a new battery with an old one.
- Don't heat, take apart, or throw batteries into a fire.

Remote control buttons and functions

This section provides you with an overview of the remote control's buttons and the features that they control.

This section does not provide detailed explanations on the use of these buttons. To determine which buttons are used with a particular feature, refer to the instructions for that feature.

The instructions for individual features are found in Chapter 3, "Operating Your TV," and Chapter 4, "Using the Special Features."



① **select switch**
Your remote control has four control layers: the TV layer, the VCR layer, the DVD layer, and the AUDIO layer. You can set up each of these layers to operate a different piece of equipment. Use this switch to select the layer you want to set up or use.

② **power button (POWER)**
Use to turn the TV on or off. When you turn the TV on, the power indicator on the front panel of the TV will light in green. (The select switch must be set to the TV layer.)

③ **number buttons (0-9)**
Use to select a channel number or to enter a parental lock code.

④ **channel control (CHANNEL)**
Press the top part of the button to change to a channel with a higher number; press the bottom part to change to a channel with a lower number.

⑤ **volume control (VOLUME)**
Press the top part of the button to turn up the volume; press the bottom part of the button to turn down the volume.

⑥ **SuperQuickView™ button (SQV)**
Press to view channels you have programmed into SuperQuickView memory.

⑦ **QuickView™ button (QV)**
Use this button to recall the last channel viewed or to recall a memorized channel. (See "Changing channels" in Chapter 3.)

⑧ **input button (INPUT)**
Use to select the input source you wish to watch:
- TV channels
- The sources connected to Input 1 and Input 2

⑨ **mute control (MUTE)**
Use to turn the sound off completely and to restore it to its original volume.

⑩ **enter button (ENTER)**
Use this button after selecting a channel number, after selecting an item from the on-screen menu system, or with the picture-in-picture mode.

⑪ **adjust buttons (▲, ▼, ◀, ▶)**
After selecting an audio or video function, use these buttons to adjust it. Also use these with the picture-in-picture mode and to select items in the menus.

⑫ **information button (INFO)**
Use to view an on-screen summary of the current settings for the TV or cable functions and the display related to Extended Data Services (XDS).

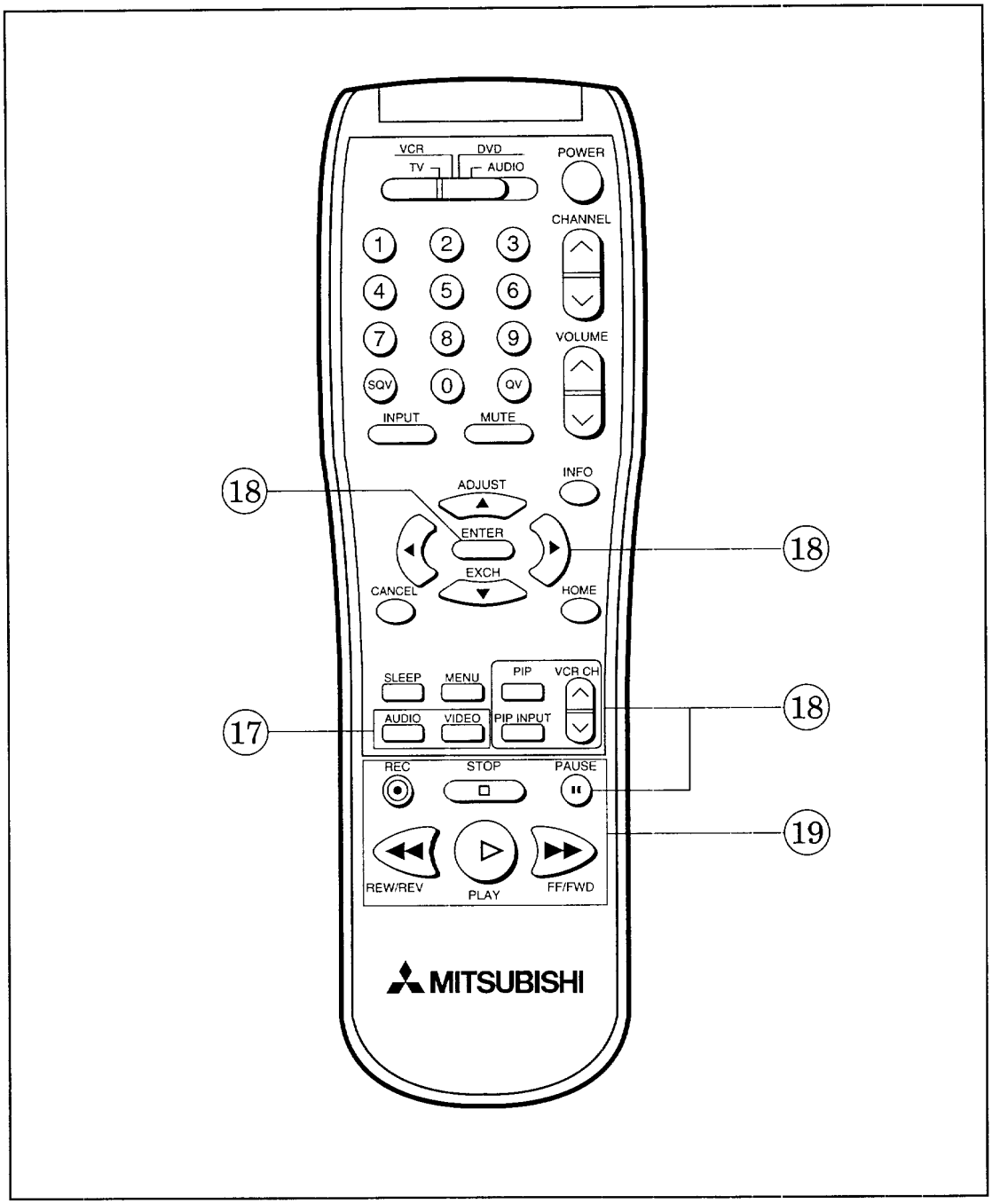
⑬ **cancel button (CANCEL)**
This button is used to cancel a channel number, to clear a channel programmed into SuperQuickView memory, and to clear the settings of some on-screen menus.

⑭ **home button (HOME)**
Press to return to regular TV viewing from the on-screen menus, to turn off the on-screen displays, and to cancel the closed captioning.

⑮ **sleep timer button (SLEEP)**
Use to program the TV to turn off automatically at a later time.

⑯ **menu button (MENU)**
Use this button to display the on-screen menu system, which contains additional instructions for special functions.

Remote control buttons and functions (cont.)



⑰ **audio and video controls**
Use these buttons to select the audio and video functions you want to adjust. Repeatedly press the AUDIO button or VIDEO button to select one of the functions listed below.

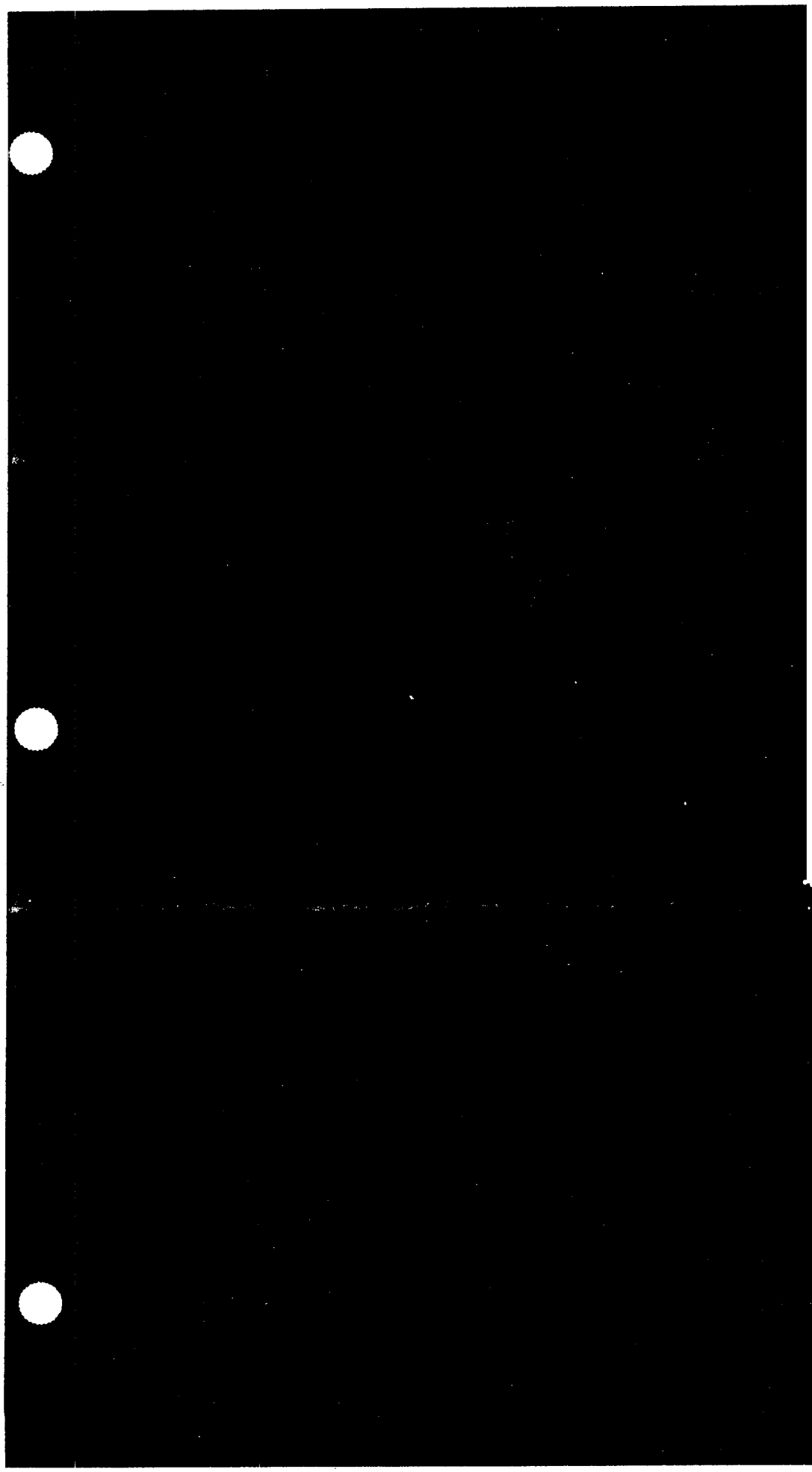
- **audio function button (AUDIO)**
  - stereo/SAP/mono
  - bass
  - treble
  - balance
  - surround off/on
  - speaker off/on

- **video function button (VIDEO)**
  - tint
  - color
  - contrast
  - brightness
  - sharpness
  - notch filter off/on
  - color temperature low/middle/high
  - skin-tone off/on
  - closed captions and text

⑱ **picture-in-picture controls**
Use to control the special picture-in-picture (PIP) function. (See "Using the Picture-in-Picture (PIP) modes" in Chapter 4.)

- **PIP button (PIP)** -- Press to turn on the PIP image, to change its size, or to cancel it.
- **VCR channel button (VCR CH)** -- If you use a VCR as the source for the PIP image, use this button to change the channel of the PIP image. This button will change channels on your VCR when the VCR is turned on even if you are not using PIP.
- **PIP input button (PIP INPUT)** -- Press repeatedly to switch the source of the PIP image between the TV and the external inputs.
- **pause button (PAUSE)** -- Press to freeze the PIP image, and to return to a "live" image.
- **exchange button (EXCH)** -- Press to exchange the pictures of the PIP image and the main image.
- **adjust buttons (▲, ▼, ◀, ▶)** -- Press to move the PIP image on-screen.

⑲ **audio and VCR buttons**
Use these buttons to control VCRs, cassette decks, DVD players, CD players, etc. These are pre-programmed to operate select Mitsubishi components.



CHAPTER TWO

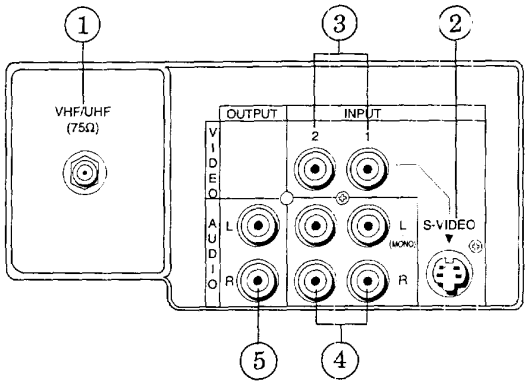
Connecting Your TV

This chapter offers step-by-step instructions for completing the most common hook-ups. It contains the following sections:

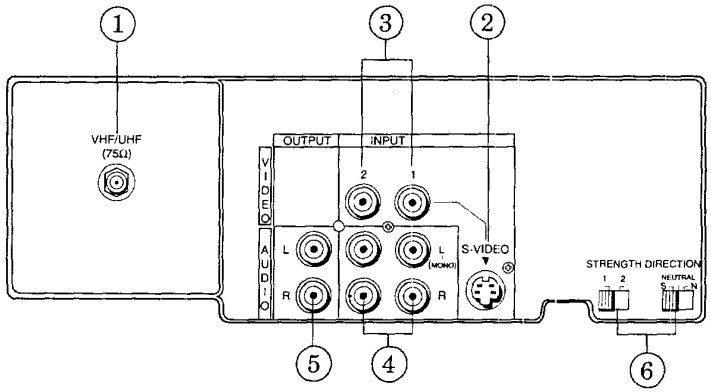
- **Overview of the Back Panel**
- **Basic Connections**

♦ Overview of the Back Panel

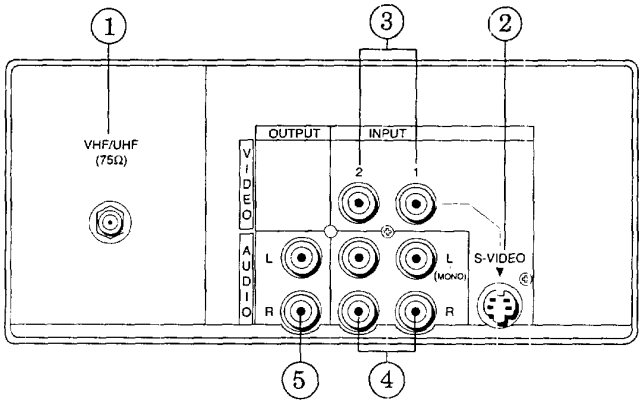
CS-32309



CS-36309, CS-40309



CK-32310, CK-36310



① **antenna terminal (VHF/UHF)**
Use to connect a VHF/UHF antenna.

② **S-VIDEO input terminal**
Use to connect the video of a Super VHS (S-VHS) VCR or other S-video component to the TV.

▷**Important:** If you connect S-video equipment, Input-1 will automatically be the input for viewing your S-video product, and you cannot use the Video input 1 terminal (③ below).

③ **video input terminals**
Use to connect the video output from a standard VCR or another component to the TV.

④ **audio input terminals**
Use to connect the audio output from a VCR or other equipment.

⑤ **audio output terminals**
Use to connect the audio of the TV to an audio system.

⑥ **color purity adjustment switches (CS-36309 and CS-40309 only)**
Set these switches according to the placement and position of your TV. See "Adjusting the color purity" in Chapter 3.

♦ Basic Connections

This section describes the equipment and procedures needed for basic hook-ups. For more complex hook-ups, contact your dealer or local cable company. The connections explained in this section are:

- **TV+antenna or cable without a cable box**
- **TV+cable with a cable box**
- **TV+separate UHF and VHF antennas**
- **TV+VCR+antenna or cable without a cable box**
- **TV+VCR+cable with a cable box**
- **TV+stereo audio system**

▷**Important:** You must connect a VCR to your TV to see two separate pictures when using the Picture-in-Picture (PIP) feature.

▶**Warning:**

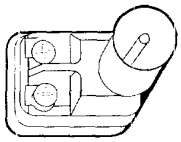
You should unplug your TV and any other components before connecting them.

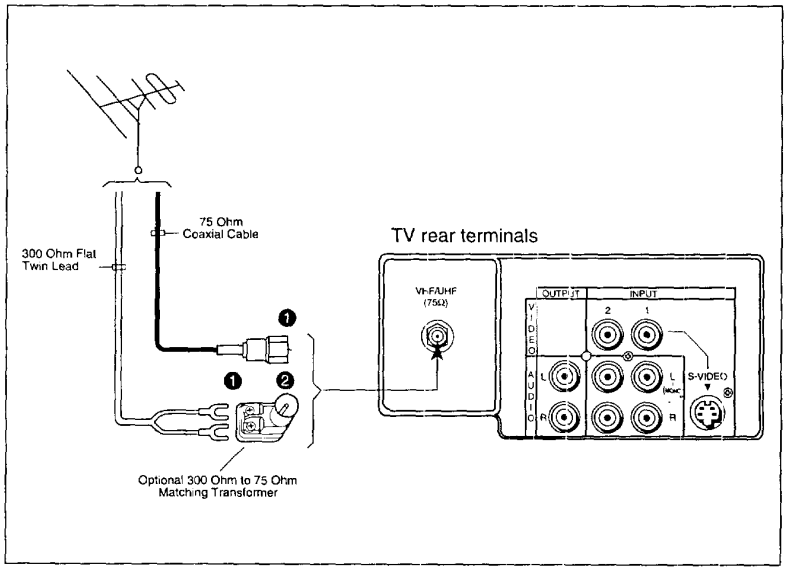
TV+antenna or cable without a cable box

equipment you will need

If you have a standard 75-ohm coaxial cable, you will not need additional equipment. If your antenna has two leads (called flat twin leads), you'll need:

- one 75-300 ohm transformer





connecting a cable

❶ Push or screw the end of the cable onto the antenna terminal on the television.

connecting an antenna with flat twin leads

❶ Use a screwdriver to connect the leads to the transformer.

❷ Push or screw the transformer onto the antenna terminal on the television.

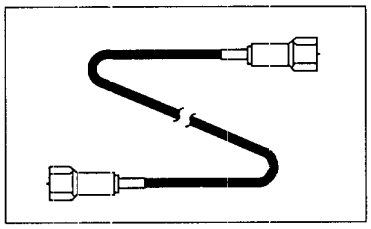
TV+ cable with a cable box

equipment you will need

Use this hook-up if you need a cable box to descramble cable signals. After you complete this hook-up, you should set up your remote control to operate your cable box. (See "Using the remote control" in Chapter 3.)

To complete the hook-up, you will need:

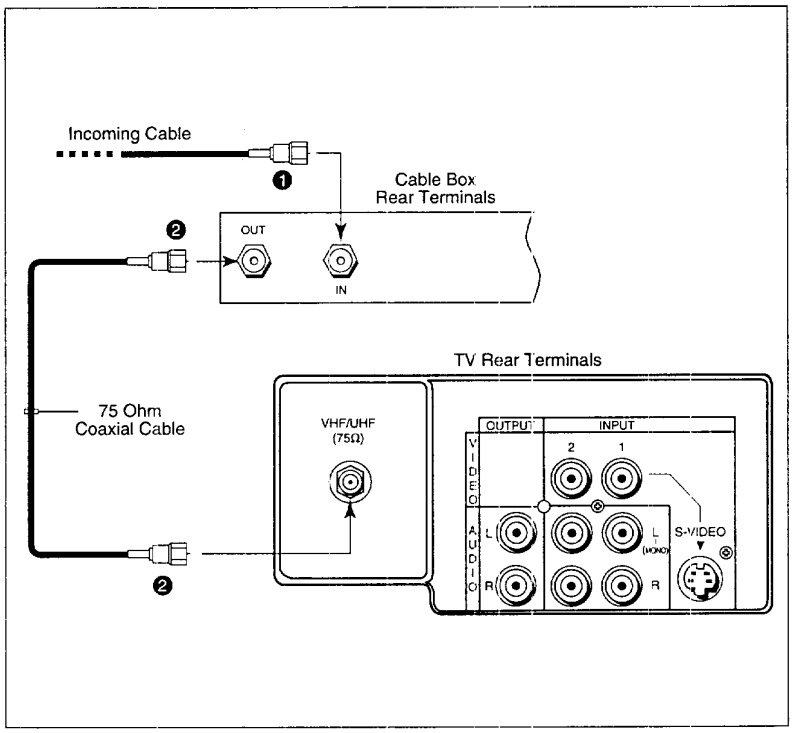
- one coaxial cable



Procedure

❶ Connect the incoming cable to the IN terminal on the cable box.

❷ Connect a coaxial cable to the OUT terminal on the cable box; connect the other end of this cable to the antenna terminal on the back of the TV.

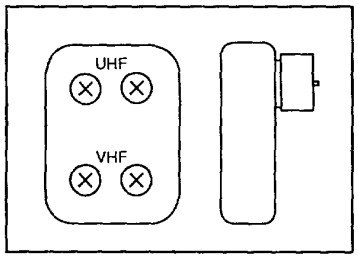


TV+ separate UHF and VHF antennas

equipment you will need

If UHF and VHF signals are brought into your home with two separate antennas, you'll need to combine the antennas into a single wire to connect them to the TV. To do this you will need a UHF/VHF combiner. (There are different combiners for different kinds of leads. Check with your local electronics store for the kind of combiner you need.)

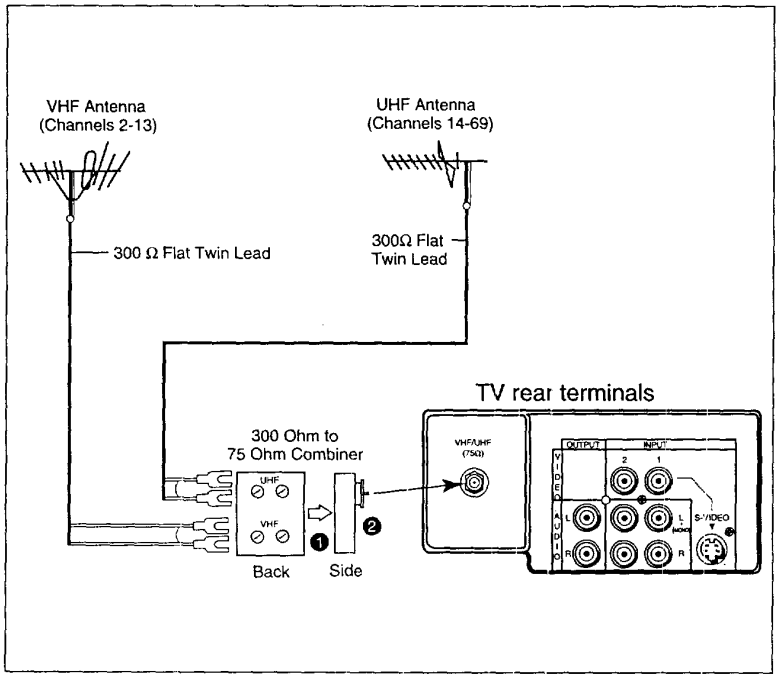
Pictured below is a standard combiner.



To connect separate UHF and VHF antennas to your television:

❶ Connect the antenna leads to the UHF/VHF combiner.

❷ Press the combiner onto the antenna terminal on the television.

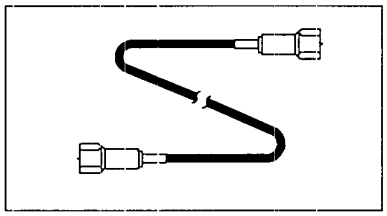


TV+VCR+antenna or cable without a cable box

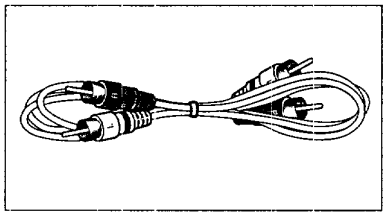
equipment you will need

You may want to connect a VCR along with your antennas or cable. To complete this hook-up, you may need the following equipment.

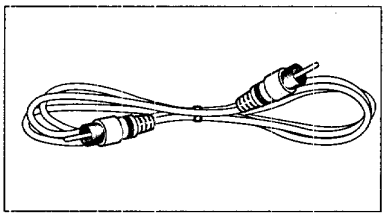
- one length of coaxial cable



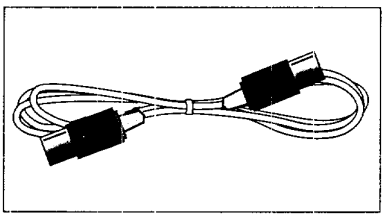
- one set of RCA pin-type audio cables



- one RCA pin type video cable (if connecting a standard VCR)



- one S-Video cable (if connecting a S-VHS VCR)



TV+VCR+antenna or cable without a cable box (cont.)

procedure
See illustration on the following page.

1. Connect the incoming cable or antenna to the ANTENNA IN terminal on the VCR.

2. Connect one end of a coaxial cable to the ANTENNA OUT terminal on the VCR.

3. Connect the other end of the cable to the antenna terminal on the TV.

4. Connect an RCA pin-type video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the television.

▷**Important:** If you are connecting a Super VHS (S-VHS) VCR, use a Super Video cable instead of an RCA pin-type video cable. Connect a Super Video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the S-VIDEO INPUT terminal on the back of the television.

5. Connect a set of RCA pin-type audio cables to the AUDIO OUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.

6. Connect the other ends of this cable to the AUDIO INPUT terminals on the back of the television.

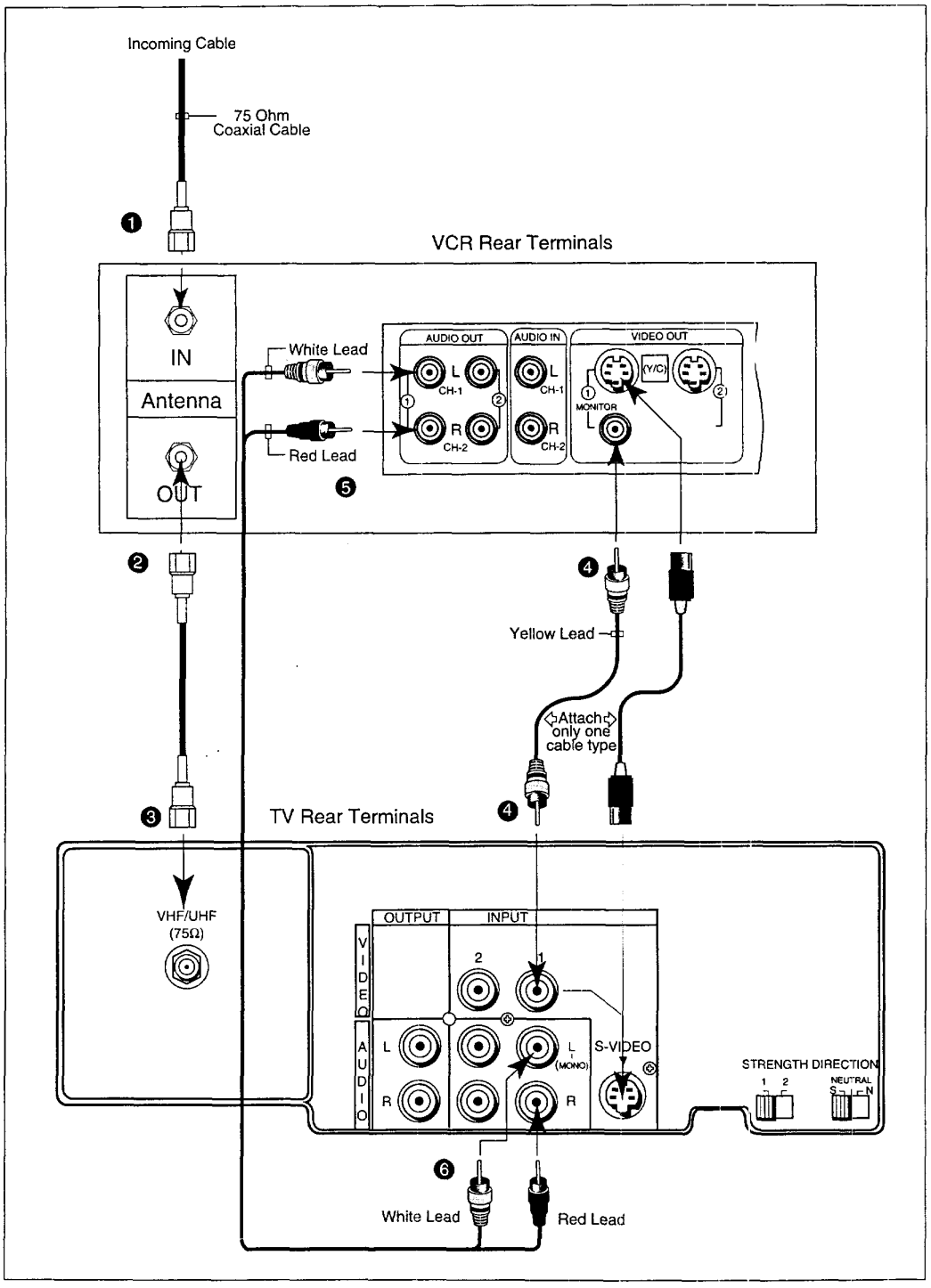
▷**Important:** If your VCR is monaural (non-stereo), you will only connect a single RCA pin-type audio cable. Connect the cable to the VCR, then connect the other end to the L (LEFT) audio input on the back of the television.

▷**Important:** If your VCR has the video channel switch, set to "OFF/AV" mode. See your VCR's owner's guide for details.

7. Set the VCR to the playback mode.

8. To view the VCR, select the external input source by using the INPUT button on the control panel or remote control.

TV+VCR+antenna or cable without a cable box (cont.)



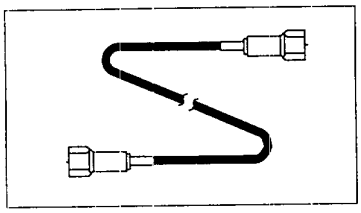
TV+VCR+cable with a cable box

equipment you will need

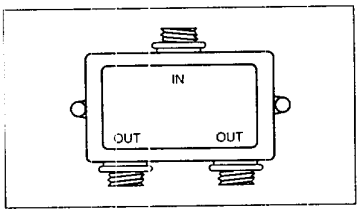
This hook-up will allow you to record scrambled channels while viewing another channel. After you complete this hook-up, you should set up your remote control to operate your cable box. (See "Using the remote control" in Chapter 3.)

To complete the hook-up, you'll need:

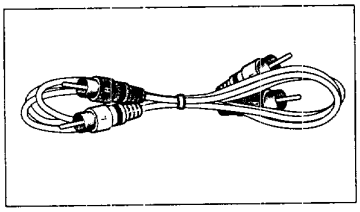
- three lengths of coaxial cable



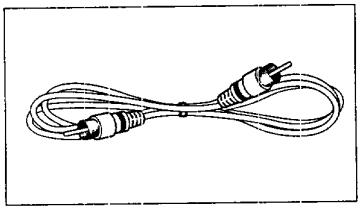
- one two-way splitter



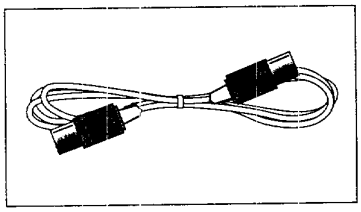
- one set of RCA pin-type audio cables



- one RCA pin-type video cable (if connecting a standard VCR)



- one Super Video cable (S-VHS) (if connecting an S-VHS VCR)



TV+VCR+cable with a cable box (cont.)

procedure
See illustration on the following page.

1. Connect the incoming cable to the IN terminal on the two-way splitter.
2. Connect a coaxial cable to one of the OUT terminals on the two-way splitter; connect the other end of this cable to the antenna terminal (UHF/VHF) on the back of the TV.
3. Connect another coaxial cable to the other OUT terminal on the two-way splitter; connect the other end of this cable to the IN (or Cable) terminal on the back of the cable box.
4. Connect the third coaxial cable to the OUT (or to TV) terminal on the back of the cable box; connect the other end of the cable to the ANTENNA IN terminal on the back of the VCR.
5. Connect an RCA pin-type video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the television.

▷**Important:** If you are connecting a Super VHS (S-VHS) VCR, use a Super Video cable instead of an RCA pin-type video cable. Connect a Super Video cable to the S-VIDEO OUT terminal on the VCR. Connect the other end of this cable to the S-VIDEO INPUT terminal on the back of the television.

6. Connect a set of RCA pin-type audio cables to the AUDIO OUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.
7. Connect the other ends of this cable to the AUDIO INPUT terminals on the back of the television.

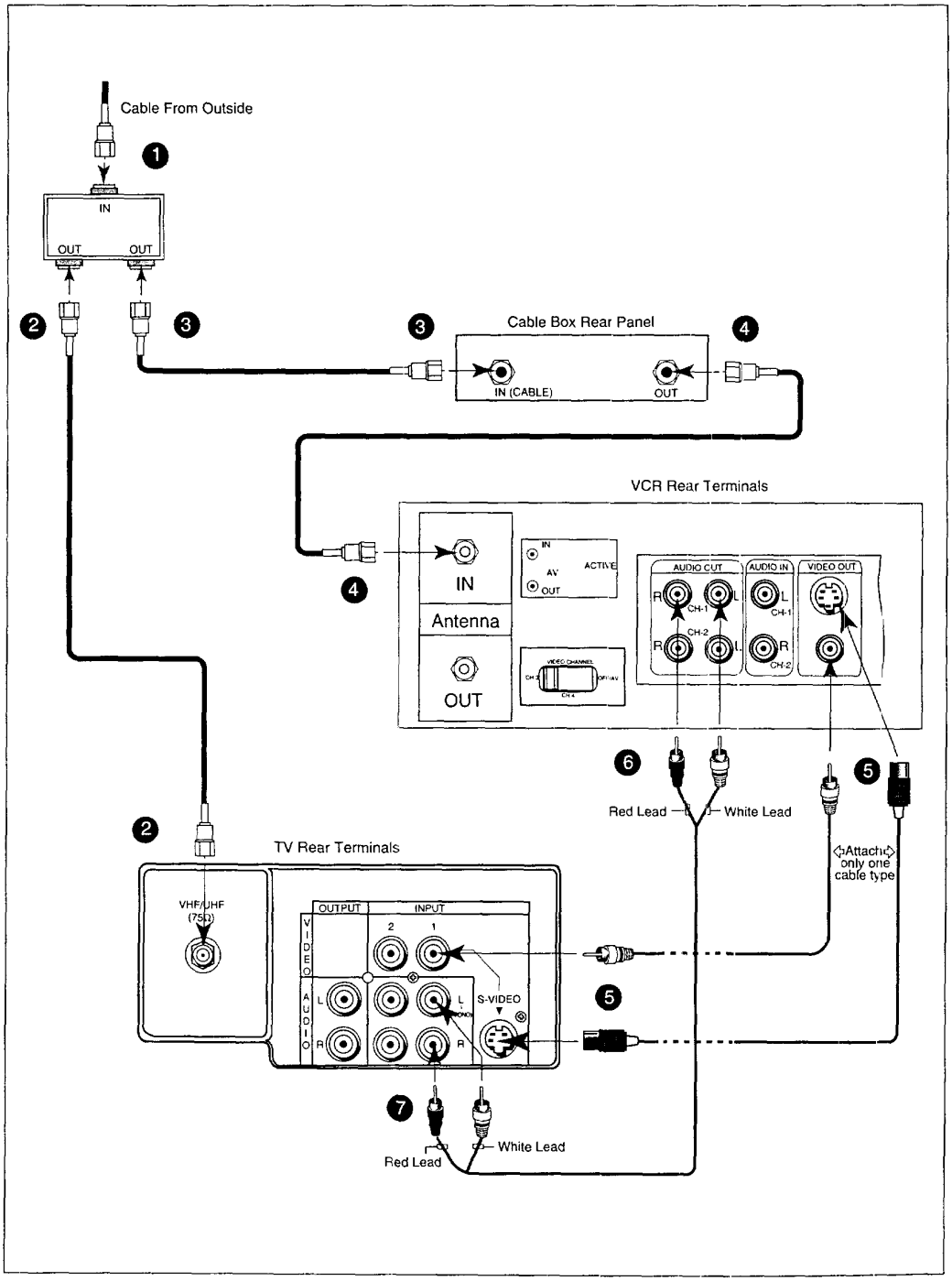
▷**Important:** If your VCR is monaural (non-stereo), you will only connect a single RCA pin-type audio cable. Connect the cable to the VCR, then connect the other end to the L (LEFT) audio input on the back of the television.

▷**Important:** If your VCR's channel switch has an "OFF/AV" setting, use this setting. See your VCR's owner's guide for details.

To view the VCR:

1. Turn on the VCR.
2. Set the TV to the external input source by using the INPUT button on the remote control or the front panel of the TV.

TV+VCR+cable with a cable box (cont.)

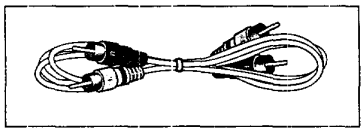


TV+ stereo audio system

equipment you will need

To hook-up an audio system, you will need:

- one set of RCA pin-type audio cables



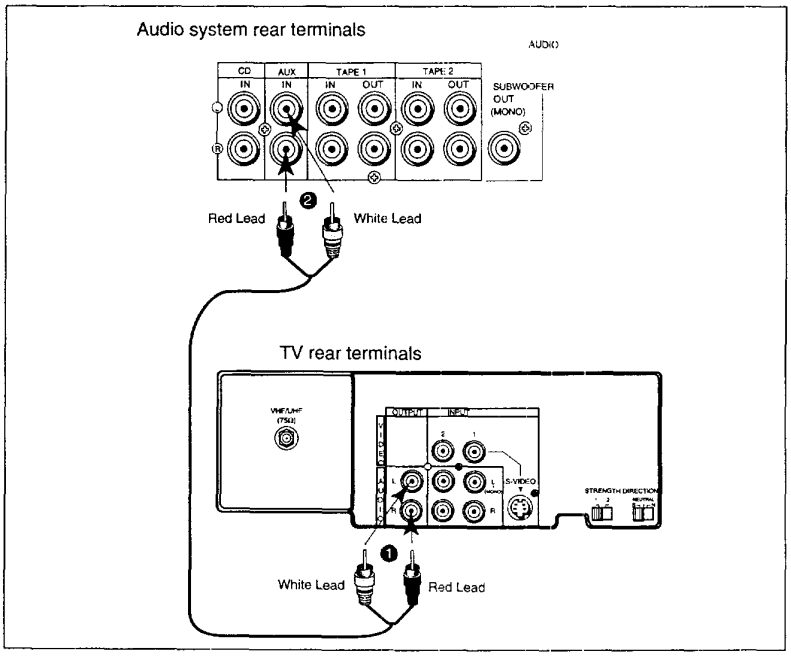
procedure

❶ Connect one end of RCA pin-type audio cables to the AUDIO OUTPUT terminals on the back of the television. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.

❷ Connect the other ends of this cable to the AUX IN terminals on the back of the audio system.

❸ Turn off the television's speakers. To do this, press the AUDIO function button on the remote control until you see the SPEAKER display. Set the speakers to "Off" by pressing the ADJUST button. See "Adjusting the sound" in Chapter 3.

❹ Set the audio system's input to the AUX position.



CHAPTER THREE

Operating Your TV

Now that your TV is connected to a cable system, an antenna, and possibly some external components, it's time to enjoy your equipment. This chapter will explain how to operate the TV, first focusing on functions that are basic and easy and then explaining some advanced features.

This chapter explains:

- **Getting Started**
- **Using the Advanced Features**

♦ Getting Started

This section is designed to get you started enjoying your new TV. If you follow these procedures one by one, you will soon begin discovering everything your television can do.

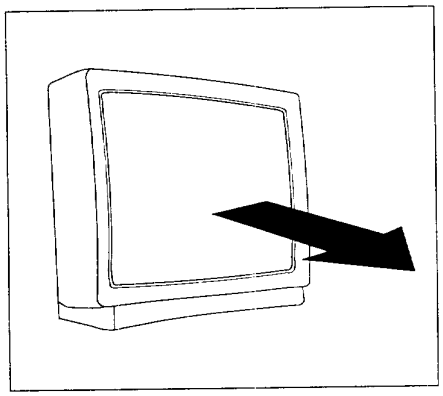
You'll find information on:

- **Adjusting the color purity**
- **Using the remote control to operate VCRs, cable boxes, and other equipment**
- **Turning the TV on/off**
- **Selecting the input source**
- **Changing channels**
- **Understanding the ViewPoint III on-screen menus**
- **Setting the clock**
- **Memorizing channels**
- **Adding and deleting channels**
- **Selecting the menu type**
- **Naming the input**
- **Naming the channels**
- **Using video mute**
- **Selecting the menu language**
- **Customizing A/V memory**
- **Adjusting the picture**
- **Using the closed caption decoder**
- **Adjusting the sound**

Adjusting the color purity (models CS-36309, CS-40309, CK-36310 only)

Because your Mitsubishi color television has a large-screen picture tube, the earth's magnetic field can produce discolored patches on the edges of your screen.

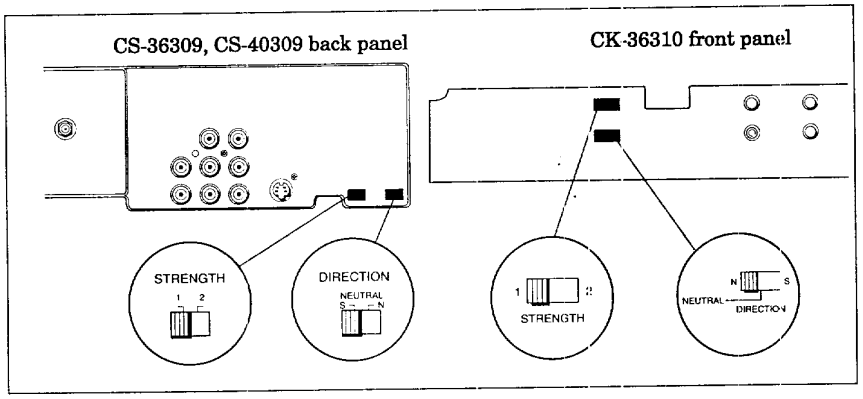
To avoid this problem, follow these instructions when you first install your television:



❶ Turn off the TV set.

❷ Determine the compass direction the screen is facing.

❸ Select the position for the DIRECTION switch according to the chart below.



TV SET DIRECTION	DIRECTION SWITCH S	NEUTRAL	N
North			X
North East			X
North West			X
South	X		
South East	X		
South West	X		
East		X	
West		X	

Adjusting the color purity (cont.)

❹ Turn the TV on, and check the color performance.

- If a discolored patch still exists, change the STRENGTH switch to the other position. If there is still impurity, wait a few minutes, then press the DEGAUSS button on the control panel.
- You may need to adjust the color purity switches if you change position or location.
- If there is still color impurity after adjusting the switches, please contact your Mitsubishi Authorized Warranty Center.

▷**Important:** Color impurity can also be caused by unshielded speakers and strong magnets. Move these items away from your TV.

Using the remote control to operate VCRs, cable boxes and other equipment

about your remote control

This TV's remote control has four "layers": the TV layer, the VCR layer, the DVD layer, and the AUDIO layer. Each layer can be used to operate a different component in your A/V system. You select the layer you want to use by setting the "select" switch across the top of the remote control.

When you first receive your remote control, the TV layer is set up to operate your Mitsubishi TV, the VCR layer is programmed to operate Mitsubishi VCRs, the DVD layer is set to operate Mitsubishi DVD players, and the AUDIO layer is set to operate the Mitsubishi A/V receiver. You can use the following buttons to operate your TV.

- power button
- pause button
- mute control
- super quick view button
- quick view button
- volume control
- input button
- channel control
- enter button
- audio and video controls
- menu button
- cancel button
- information button
- home button
- sleep timer button
- number buttons
- PIP controls
- A/V memory button

If you have a cable box (including the digital satellite box), a non-Mitsubishi VCR, a Mitsubishi laserdisc player, an A/V receiver, or a compact disc, you can set up the layers in the remote control to operate these components.

The VCR layer can be set up to operate a non-Mitsubishi VCR or a Mitsubishi DVD player; the DVD layer can be set to operate a Mitsubishi DVD player, another VCR, cable box, Mitsubishi laserdisc player, A/V receiver; the AUDIO layer can be set up to operate a Mitsubishi DVD player, an A/V receiver or cable box; and the TV layer can be set up to operate the volume control of an A/V receiver.

setting up the remote control to operate your VCR

❶ Turn off your VCR.

❷ Set the select switch on the remote to choose the layer you want to set up: VCR or DVD.

❸ While holding in the POWER button on the remote, enter the code number listed in the chart on the following page for your brand of VCR. Be sure to enter both digits of the code number. If more than one number is listed, begin with the first one.

Using the remote control to operate VCRs, cable boxes and other components (cont.)

If your VCR is this brand...	...enter this code	If your VCR is this brand...	...enter this code	If your VCR is this brand...	...enter this code
Mitsubishi (A)	01	Magnavox	03, 10, 11	Scot	15
Mitsubishi (B)	02	Multitech	06	Sharp	16
Canon	03	NEC	12	Sony	17, 18
Emerson	04, 05	Panasonic	03, 21	Sylvania	03, 10, 11
Funai	06	Philco	03, 10	Symphonic	06
General Electric	03	Philips	03, 10, 11	Teknika	04, 06
Goldstar	07	Quasar	03	Toshiba	15
Hitachi	08	RCA	08, 13, 20	Totevision	07
JVC	09	Sanyo	14	Zenith	19

4. Release the POWER button.

5. Press the POWER button again. Your VCR should turn on. If the VCR turns on, your remote control is now set up to operate your VCR. (See "using your remote control to operate your VCR" in this chapter for remote control VCR functions.)

If your VCR does not turn on, repeat the instructions, trying each code number listed for your brand of VCR. If none of these code numbers work, try each number, 01 through 21.

setting up the remote control to operate your cable box or satellite box

1. Turn on your cable/satellite box.

2. Set the select switch on the top of the remote to choose the layer you want to set up: DVD or AUDIO.

3. While holding in the POWER button on the remote, enter the code number listed in the chart below for your brand of cable/satellite box. Be sure to enter both digits of the code number. If more than one number is listed, begin with the first one.

4. Release the POWER button. (See "using your remote control to operate your cable/satellite box" later in this chapter.)

If your cable/satellite box is this brand...	...enter this code	If your cable/satellite box is this brand...	...enter this code	If your cable/satellite box is this brand...	...enter this code
ABC	57, 59, 62, 67, 89	Oak	61, 62, 82	Scientific Atlantic	66, 88, 89, 91, 92
Color Voice	73, 74, 98	Panasonic	63, 70	Signature	57
Comtronics	93	Paragon	51	Sony DSS	47
Gemini	55	Philips	73, 74, 75, 76, 77 93, 94, 98, 99	Sprucar	63
General Electric	66			Starcom	54, 55, 56, 87
General Instruments	55, 56, 57	Pioneer	64, 65, 84	Stargate	55
Hamlin	52, 53, 69	Prime Star	48	Tocom	67, 68, 72
Hitachi	57	Pulsar	51	Toshiba	51
Jerrold	54, 55, 56, 57, 58 59, 60, 85, 87	RCA	63	United Artists	62
		RCA DSS	49	United Cable	54
Macom	71	Regal	53	Viewstar	93, 94
Magnavox	94	Regency	79	Zenith	51
Memorex	51	Samsung	65, 84		

❺ Press the POWER button again. Your cable/satellite box should turn off. If the cable/satellite box turns off, your remote control is now set up to operate your cable/satellite box. If your cable/satellite box does not turn off, repeat the instructions above, trying each code number listed for your brand of cable/satellite box. If none of these numbers work, try each number, 51 through 99.

▷**Important:** Some of the boxes can be turned on with the CHANNEL buttons or the number buttons instead of the POWER button.

setting up the remote control to operate your Mitsubishi components (DVD player, laserdisc player or A/V receiver)

❶ Turn off your component.

❷ Set the select switch on the top of the remote to choose the layer you want to set up. For a laser disc player, choose DVD. For a DVD player, choose VCR, DVD or AUDIO. For an A/V receiver, choose DVD or AUDIO.

❸ While holding in the POWER button on the remote control, enter one of these code numbers:

- For a Mitsubishi A/V receiver and compact disc player: 30, 31, 35 or 38
- For a Mitsubishi laserdisc player: 32 or 33
- For a Mitsubishi DVD player: 34
- For a Yamaha A/V receiver and compact disc player: 36 or 37

Be sure to enter both digits of the code number. If more than one number is listed, begin with the first one.

❹ Release the POWER button.

❺ Press the POWER button again. Your component should turn on. If it does, your remote control is now set up to operate your component. If it does not turn on, repeat the instructions above, trying the other code numbers listed for your component.

(See "using your remote control to operate your Mitsubishi DVD player or laserdisc player" and "using your remote control to operate your Mitsubishi A/V receiver" in this chapter for information on using the remote to operate your other components.)

Using the remote control to operate VCRs, cable boxes and other components (cont.)

notes about your remote control

▷**Important:** Sometimes manufacturers will change their products, or they may use more than one code. If this is the case, your remote may not be able to operate your VCR or cable box.

▷**Important:** When you replace the batteries in your remote control, the remote will usually return to its initial setting. You may need to set up your remote again.

resetting the layer of your remote to the original factory setting

1. Turn off the power of the component you wish to reset.
2. Set the select switch to choose the layer you have set the component to.
3. While holding in the POWER button on the remote, enter the code 00.
4. Release the POWER button.

using your remote control to operate your VCR

After you have set up your remote control for your particular brand of VCR, you can use the remote to operate your VCR.

1. Use the select switch on the remote control to choose the layer that you set up to operate your VCR: VCR or DVD.
2. Point the remote at the VCR and press the desired buttons.

If you are using a Mitsubishi VCR, you will be able to use all of the buttons on the remote to operate your VCR except for MUTE, VOLUME, and the PIP function buttons, which will always operate the TV itself.

If you are using another brand of VCR, you can use the POWER, CHANNEL, REC, STOP, PAUSE, REW, PLAY, and FF buttons to operate your VCR.

using your remote control to operate your cable/satellite box

After you have set up your remote control for your particular brand of cable/satellite box, you can use the remote to operate it.

1. Use the select switch on the remote to choose the layer that you set up to operate your cable/satellite box: DVD or AUDIO.
2. Point the remote at the box and press the desired buttons.

You can use the POWER, CHANNEL, numbers (0–9), and ENTER buttons to operate your cable box. If you are using an RCA DSS or PRIMESTAR® receiver, you may be able to use additional buttons.

Using the remote control to operate VCRs, cable boxes and other components (cont.)

using your remote control to operate your Mitsubishi DVD player or laserdisc player

After you have set up your remote control for your DVD player or laserdisc player, you can use the remote to operate the player.

1. Use the select switch on the remote control to choose the layer that you set up to operate your laserdisc player: DVD.
2. Point the remote at the DVD player or laserdisc player and press the desired buttons.

You can use the POWER, CHANNEL, numbers (0–9) (for laserdisc player only), INFO, MENU, CANCEL, STOP, PAUSE, REW, PLAY, and FF buttons to operate your DVD player or laserdisc player.

using your remote control to operate your Mitsubishi audio products

After you have set up your remote control for your A/V receiver, you can use the remote to operate it.

1. Use the select switch on the remote control to choose the layer that you set up to operate your receiver: TV, DVD, or AUDIO.
2. Point the remote control at the A/V receiver and press the desired buttons.

If you are using a Mitsubishi HTS-100, you can use the POWER, VOLUME, and MUTE buttons to operate the receiver.

If you are using a Mitsubishi HTS-300, you can use the POWER, CHANNEL, INPUT, VOLUME, ENTER, number (0–9), INFO, MENU, CANCEL, AUDIO, VIDEO, ADJUST, and MUTE buttons to operate the receiver.

If you are using a Mitsubishi M-VR400, M-VR600, M-VR800 or M-VR1000, you can use the POWER, VOLUME, 0-9, and MUTE buttons to operate the receiver. The ADJUST buttons will access the M-VR800/1000 menus.

If you are using the Mitsubishi M-CD500 CD player, you can use the PAUSE, STOP, FF, and REW buttons to operate the CD player.

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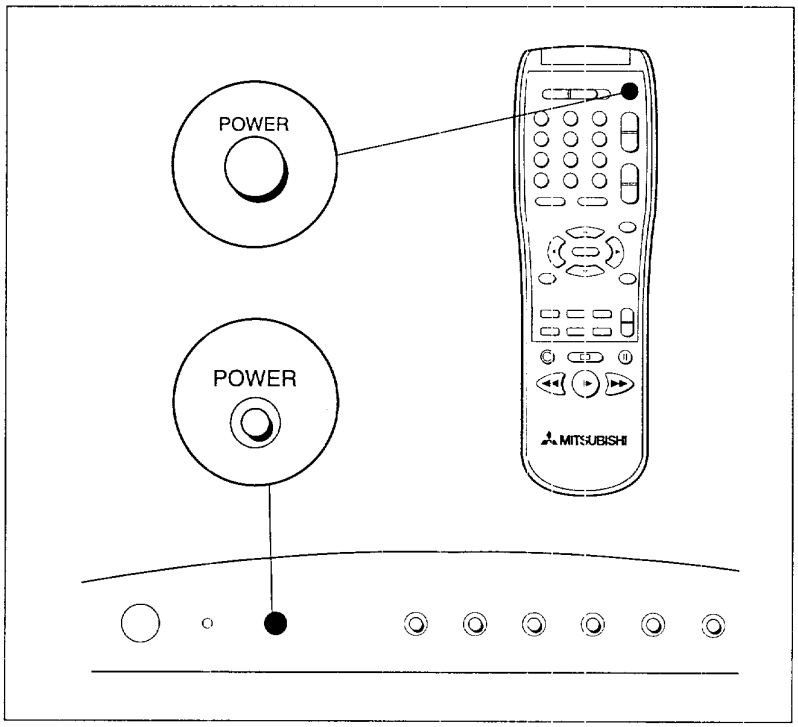
Turning the TV on/off

▷**Important:** Before using the remote control to operate the TV, set the select switch on the top the remote control to TV.

Use the POWER button on either the control panel or the remote control to turn the TV on and off. The power indicator will light up in green when you turn the TV on.

The first time you turn the TV on after unpacking it, the "Select Menu Language" screen will appear. Use the steps on page 60 to select the language for the on-screen menu.

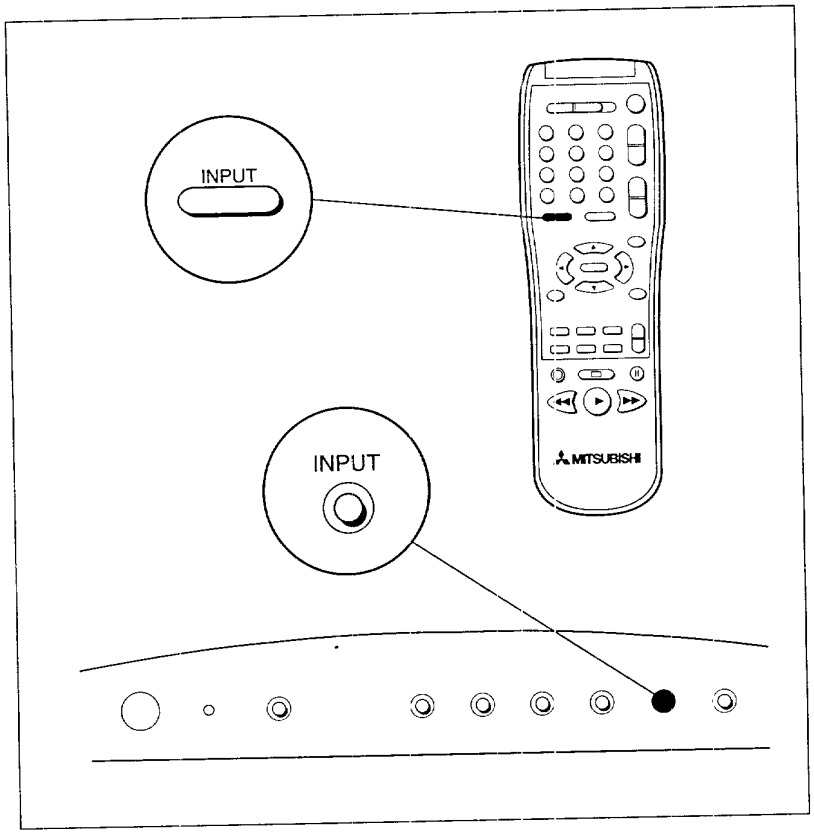


▷**Important:** There is always a small amount of current flowing into the TV, even when the power is turned off. This maintains any changes to the TV's settings and operates the built-in clock and timing functions. Unplugging the set will erase these settings, requiring you to set them again. Unplug the TV only when it won't be used for a long time.

Selecting the input source

If you connected components such as VCRs, camcorders, or laserdisc players to your TV, you will need to change the input source to view the signals from these components.

To select an input source, press the input button (INPUT) on the control panel or on the remote control.



You can choose between the following input sources:

- TV channels
- The equipment connected to Input 1 and Input 2

The name of the input you have selected will display briefly in the corner of the screen.

Changing channels

Your TV offers you four ways of changing channels once their numbers have been programmed into channel memory:

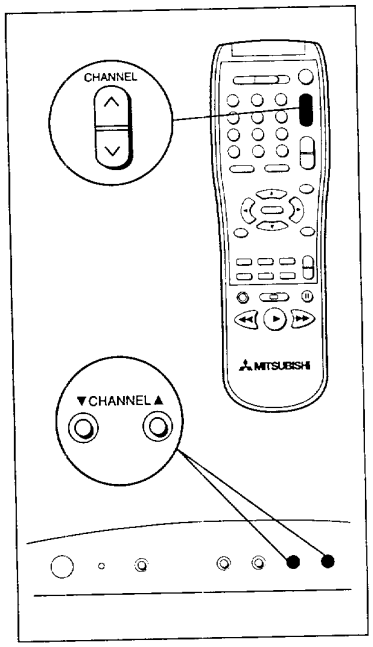
- selecting channels one-by-one with the channel controls
- directly accessing a channel by pressing the number buttons
- using the QuickView™ option to recall the last channel, or to switch to a particular memorized channel
- using the SuperQuickView™ function to alternate between channels on a user-chosen list

▷**Important:** To change channels faster, use either of the following procedures:

- Enter three digits for every channel number, using zeros where needed. For example, enter 004 to view channel 4 and 028 to view channel 28.
- Press the ENTER button after selecting the number of the channel. For example, press 4 and ENTER to view channel 4.

▷**Important:** If you memorized channels using the Indoor/Outdoor Antenna, your TV can receive antenna channels 2-13 (VHF) and 14-69 (UHF). If you memorized channels using the Cable Antenna, your TV can receive cable channels 1-125. If you select a channel outside of the memorized range, your TV will not change channels.

Changing channels (cont.)



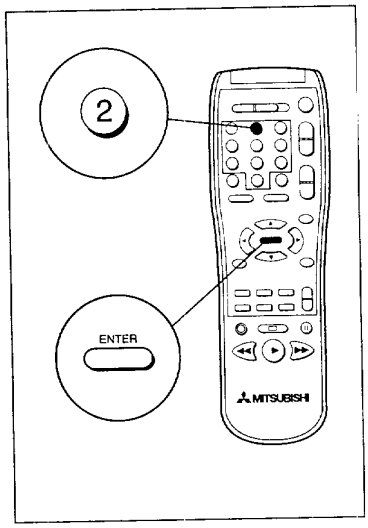
changing channels one-by-one

To change channels:

❶ Press one of the channel scan controls (CHANNEL) on the control panel or on the remote control. The TV will automatically tune to the next memorized channel.

▷**Important:** You cannot change channels one-by-one until available channels have been programmed into memory. (See "Memorizing channels" in this chapter.)

The picture will disappear and the sound will be muted for a moment while changing channels.



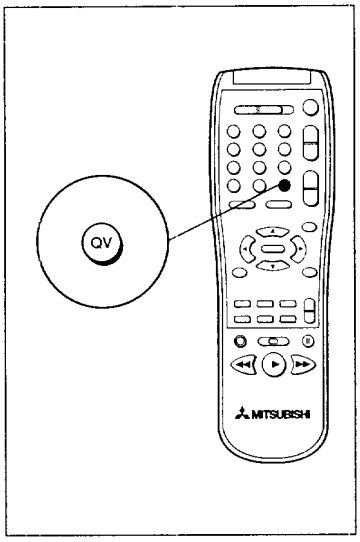
changing channels directly

To move directly to a particular channel without going through the programmed channels in between:

❶ Use the number buttons on the remote control to select the number of the channel you want to view.

❷ Press the ENTER button.

using the QuickView™ option



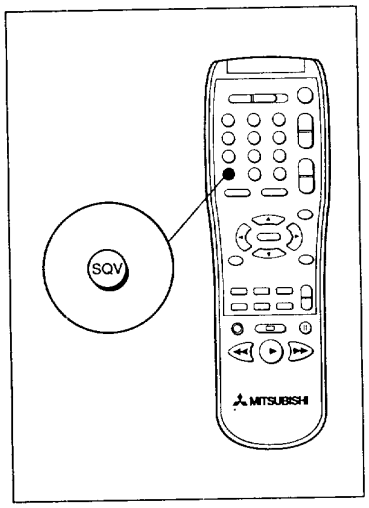
The **QuickView** feature can work in two ways: to recall the last channel viewed (Last Channel Recall), *or* to recall a channel you put into QuickView memory.

- If you have not memorized a channel into QuickView Memory, **Last Channel Recall** allows you to use the QV button to switch back and forth between the last two channels viewed.
- **QuickView Memory** allows you to use the QV button to switch back and forth between the last channel you were watching and the channel you put into QuickView memory.

Setting the QuickView memory

1. Tune to the channel you wish to memorize.
2. Press and hold the QV button for about 2 seconds. The channel numbers will appear on the screen, indicating that you have memorized that channel.
3. After changing to another channel, press the QV button to immediately return to the memorized channel.
4. If you press the QV button while watching the memorized channel, you will return to the last channel viewed.

▷**Important:** The memorized QV channel will remain in memory until you replace it with a new channel using the procedure above. To restore the Last Channel Recall feature, re-memorize the channels. (See "Memorizing Channels" in this chapter.) This procedure also erases all of your SuperQuickView™ channels and channel names.



using the SuperQuickView™ option

To view selected channels programmed into SuperQuickView memory:

❶ Enter the desired channel into SuperQuickView memory. (See "Using Super-QuickView," in this chapter.)

❷ Press the SQV button repeatedly to view the SQV channels in sequence.

Understanding the ViewPoint® on-screen menus

One of the distinctive features of this TV is Mitsubishi's exclusive ViewPoint On-Screen Operating System.

Unlike other television menus systems, ViewPoint includes a special Picture-in-Picture screen to let you view the TV picture while you are using the menu.

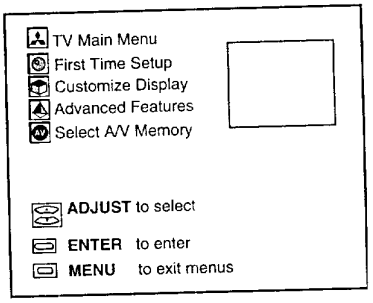
ViewPoint also provides step-by-step instructions for using some of the TV's special capabilities.

When using the ViewPoint system, please keep the following in mind:

- The selected menu item is indicated in yellow.
- The on-screen menus will turn off if no item is selected within 5 minutes.
- Some on-screen menu items must be set before other items are available. For example, "Set the Timer" will only be available if "Set the Clock" has been set.
- You can exit the on-screen menus any time by pressing the MENU button repeatedly. You will then return to regular TV viewing.
- You can also exit the on-screen menus by pressing the HOME button on the remote control.

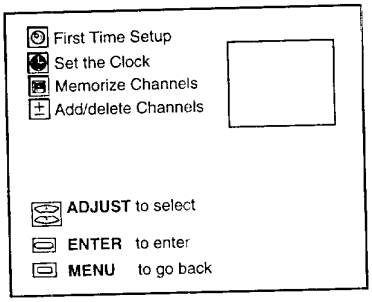
Setting the clock

Your TV contains an internal clock. If there is a broadcaster in your area that is sending the current time along with its regular broadcast signal, then your TV can automatically set its clock with this signal. Otherwise, you can set the clock yourself.

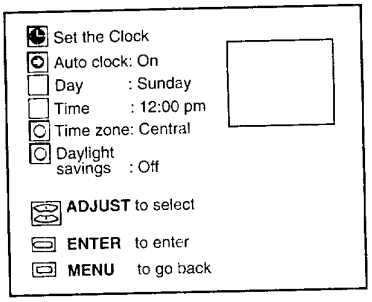


❶ Press the MENU button on the remote control. The Main Menu will appear on the screen.

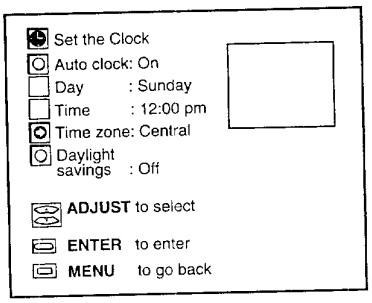
❷ Use the ADJUST buttons to select "First Time Setup." Press ENTER.



❸ You will see the "First Time Setup" screen. Use the ADJUST buttons to select "Set the Clock." Press ENTER.



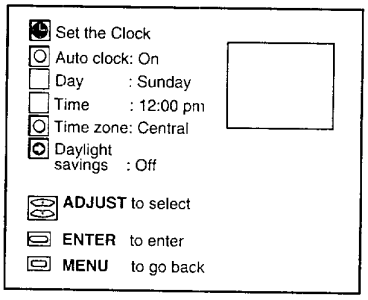
❹ If you want your TV to set its clock automatically, use the ADJUST buttons to set "Auto clock" to "On"; if you want to set the clock yourself, set "Auto clock" to "Off," and see the section "setting the clock yourself," in this chapter.



using automatic clock setting

- Use the ADJUST buttons to select the time zone you live in. The available time zones are: Central, Mountain, Pacific, Alaska, Hawaii, Atlantic and Eastern.
- Press the ENTER button.

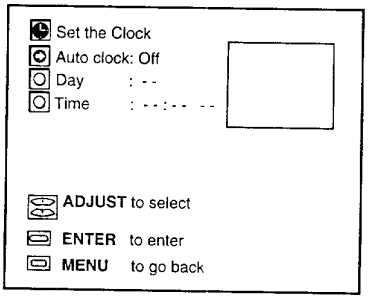
Setting the clock (cont.)



- If you follow daylight savings, use the ADJUST buttons to answer the question with "On." Otherwise, answer "Off." Press ENTER.
- The automatic clock set up is completed. The screen will return to the "First Time Setup" menu.

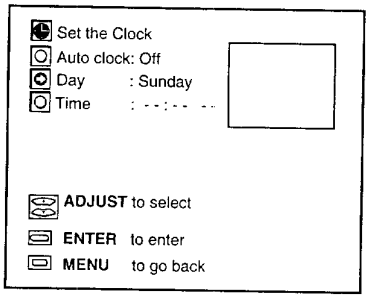
▷**Important:** The TV's clock will not be set until you tune your TV to a channel that is broadcasting the time via Extended Data Services (XDS). If your TV loses power, you will need to tune to that channel again to reset your clock.

▷**Important:** If you set "Daylight savings" to "On," your TV will adjust the clock by one hour when daylight savings begins and ends.



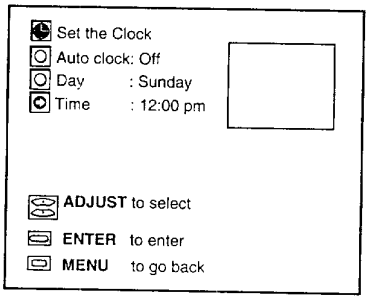
setting the clock yourself

- Use the ADJUST buttons or the key pad to set "Auto clock" to "Off." Press ENTER.
- Use the ADJUST buttons to select the "Day." Press ENTER.



- Use the ADJUST buttons or number buttons to set the "Time."
- After you have set the "Day" and "Time," press the ENTER button to start the clock.

The screen will return to the "First Time Setup" menu.



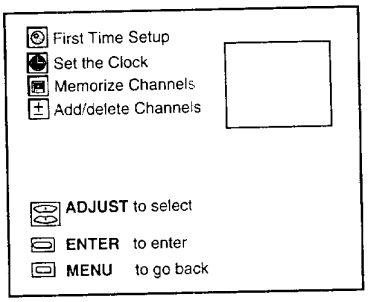
▷**Important:**

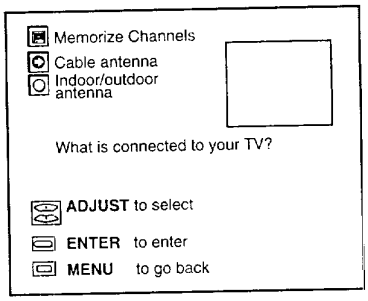
You can clear the time by pressing the CANCEL button when "Auto clock" is highlighted.

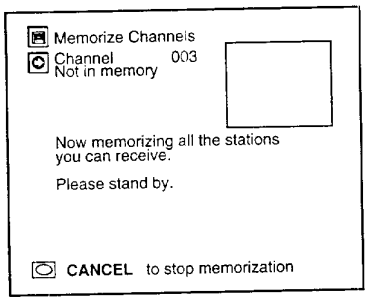
If you are receiving a VCR signal on channel 3 or channel 4, the automatic setting may not work correctly.

Memorizing channels

You can use the menus to automatically memorize the channels your TV can receive. Once channels are memorized, you can scan through them using the channel up/down controls on the remote control and control panel.







❶ Press the MENU button on the remote control. The Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "First Time Setup." Press ENTER.

❸ You will see the "First Time Setup" screen. Use the ADJUST buttons to select "Memorize Channels." Press ENTER.

❹ Use the ADJUST buttons to choose the type of antenna you connected: Cable antenna or Indoor/outdoor antenna. Press ENTER.

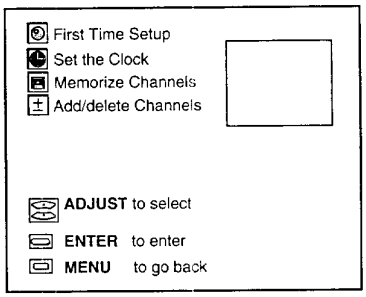
❺ You will see a message that channel memorization is in progress. A channel being added to memory will be labeled "In memory." Channels not being added will be labeled "Not in memory." You can stop channel memorization at any time by pressing CANCEL.

▷**Important:** Channel up/down controls will work only after channels have been memorized. After memorizing, use the channel controls (CHANNEL) to advance sequentially to the next memorized channel. Use the number buttons to select individual channels.

Memorizing the channels may erase all of your QV or SQV channels and channel names, and may also cancel the program timer settings.

Adding and deleting channels

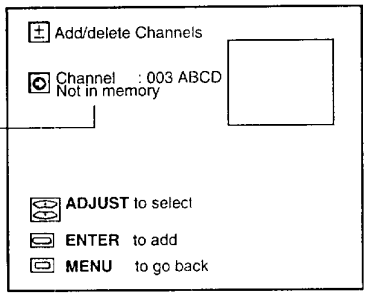
After all available channels have been memorized with the "Memorize Channels" feature, channels with weaker signals can be added or deleted with the following procedure.



❶ Press the MENU button on the remote control. The Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "First Time Setup." Press ENTER.

❸ Use the ADJUST buttons to select "Add/delete Channels." Press ENTER.



Either "In memory" or "Not in memory" will appear.

❹ The "Add/delete Channels" screen will appear. Use the ADJUST buttons to select the channel you would like to add or delete.

You can also use the CHANNEL controls to change channels.

❺ If a channel is labeled "In memory," use the CANCEL button to remove it from memory. If a channel is labeled "Not in memory," use the ENTER button to add it to memory.

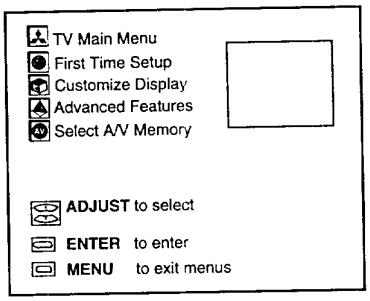
❻ When you are finished adding and deleting channels, press the HOME button to return to normal TV viewing.

Adding a channel to memory allows you to tune to the channel with the channel up/down controls. If a channel is not in memory, you can only tune to it with the number buttons.

Selecting the menu type

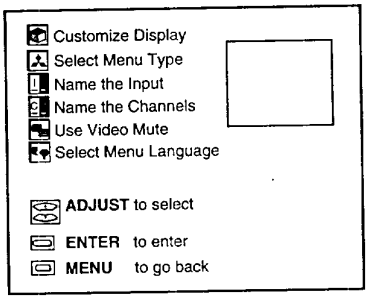
You can display the on-screen menus in one of two ways. The "Standard menu," which is illustrated in this manual, provides step-by-step instructions for all features. The "Advanced menu" lets you select each feature directly by its name and icon.

Your TV's normal setting is the "Standard menu." To switch between the Standard and Advanced menus:

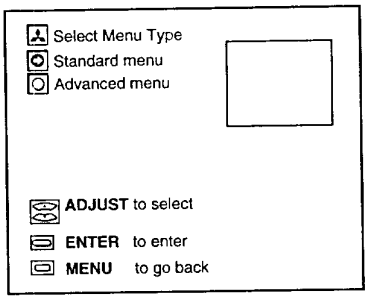


❶ Press the MENU button on the remote control. The Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Customize Display." Press ENTER.



❸ You will see the "Customize Display" menu. Use the ADJUST buttons to select "Select Menu Type." Press ENTER.



❹ Use the ADJUST buttons to select "Standard menu" or "Advanced menu."

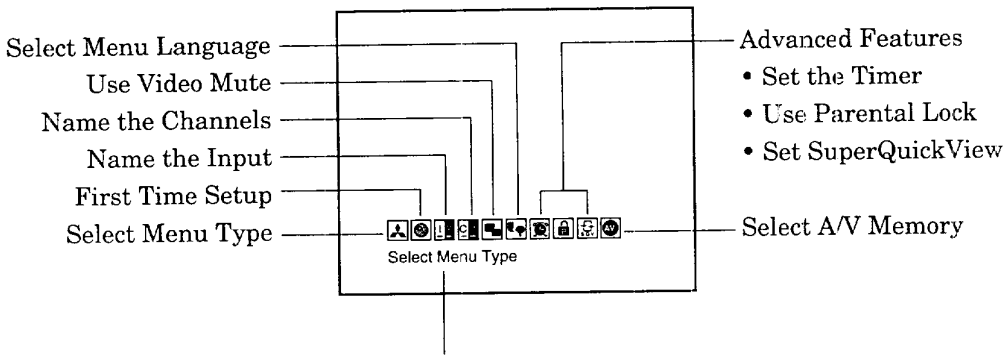
❺ Press the ENTER or MENU button.

Selecting the menu type (cont.)

If you select the "Standard menu," the screen will return to the "Customize Display" menu. If you select the "Advanced menu," the screen will show the Advanced Main menu (shown below).

To use the Advanced menu, use the ADJUST buttons to highlight the icon of the feature you want to use, then press ENTER. The name of the highlighted icon appears at the bottom of the screen. This menu disappears if you do not select an item within 5 minutes.

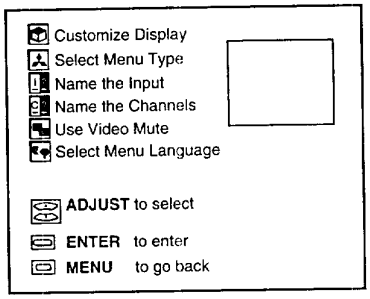
The Advanced Menu

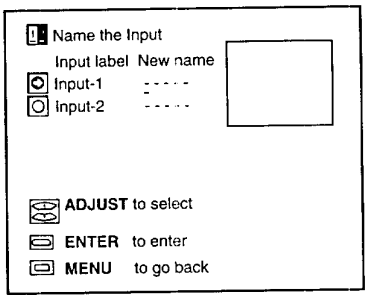


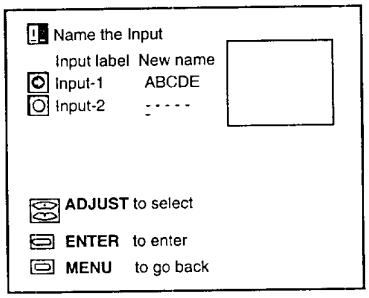
Naming the input

This feature allows you to name the inputs so that you can keep track of components you have connected to your TV. For example, you might name one input "VCR," and another one "DISC." After naming, the new name will appear on the screen display.

The original names are Input-1 and Input-2.







❶ Press the MENU button on the remote control. The Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Customize Display." Press ENTER.

❸ You will see the "Customize Display" screen. Use the ADJUST buttons to select "Name the Input." Press ENTER.

❹ Use the ADJUST buttons to select the input you want to name (Input-1, Input-2). Press ENTER.

❺ Use the ADJUST buttons and the ENTER button to select each letter in the new name.

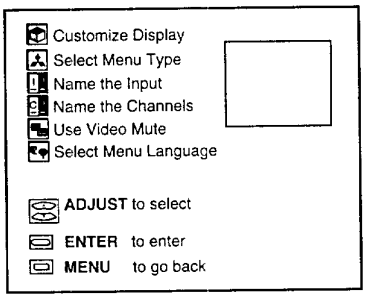
You can name the inputs using letters (A – Z), numbers (0 – 9), or symbols (: / . , ( ) ! " # $ % & ' blank + ; < = > ? blank -).

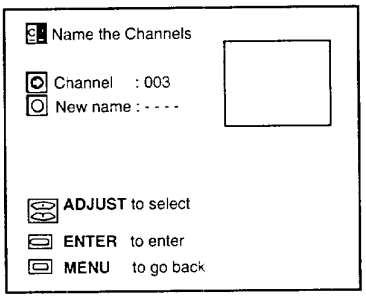
If you press the CANCEL button while setting the name, you will move one position back. You can clear the entire name by pressing CANCEL when the first position is seleced.

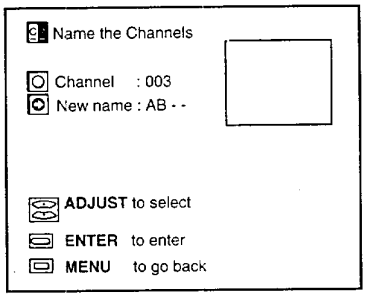
❻ When you are finished, press the MENU button; the screen will return to the "Customize Display" menu.

Naming the channels

You can name the channels your TV receives, helping you keep track of the many channels available. After you enter a name, it will appear on-screen, next to the channel number.







1. Press the MENU button on the remote control. The Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Customize Display." Press ENTER.
3. You will see the "Customize Display" screen. Use the ADJUST buttons to select "Name the Channels." Press ENTER.
4. Use the ADJUST buttons, channel controls or number buttons to select the channel you want to name. Press ENTER.
5. Use the ADJUST buttons and the ENTER button to select each letter in the new name. You can use letters (A – Z), numbers (0 – 9), or symbols (: / . , ( ) ! " # $ % & ' blank + ; < = > ? blank -).

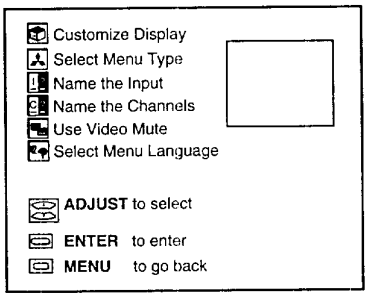
   When you are setting the name, you can clear it by pressing the CANCEL button when the left-most position is pointed.
6. When you are finished, press the HOME button to return to normal viewing

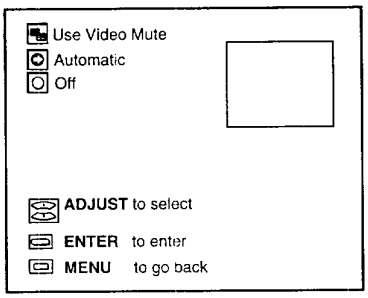
▷ **Important:** The names you set will appear instead of the call letters being supplied by Extended Data Services (XDS).

▷ **Important:** You can name up to thirty channels. If you try to name more, the message "Memory over!" will indicate that the memory is full. If the memory is full and you want to name a channel, you must use the above steps to clear the name for an existing channel. You can then select the new channel to name.

Using video mute

When you use the video mute functions, your TV will display a blue screen whenever it is receiving a weak VCR signal or there is no video input. If you want to try viewing a weak signal, you can turn the video mute off.

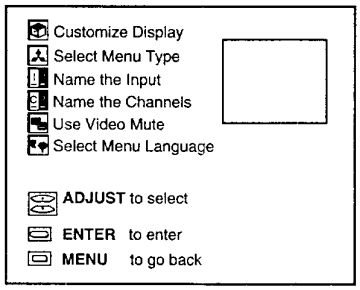


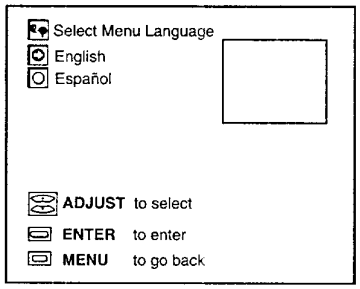


1. Press the MENU button on the remote control. The TV Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Customize Display." Press ENTER.
3. Use the ADJUST buttons to select "Use Video Mute." Press ENTER.
4. Using the ADJUST buttons, select "Automatic" to turn video mute on or "Off" to turn video mute off.
5. Press the ENTER or MENU button to return to the "Customize Display" menu.

Selecting the menu language

This TV allows you to display the on-screen menus in either of two languages, English or Spanish.





1. Press the MENU button on the remote control. The TV Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Customize Display." Press the ENTER button.
3. Use the ADJUST buttons to select "Select Menu Language." Press the ENTER button.
4. Use the ADJUST buttons to select the language for the on-screen menu.
5. Press the ENTER or MENU button to return to the "Customize Display" menu.

Selecting the A/V Memory position

Your TV has four A/V Memory positions. Each A/V Memory position contains preset picture and sound settings to best suit the type of program you are watching. You can change or reset these memories as much as you like.

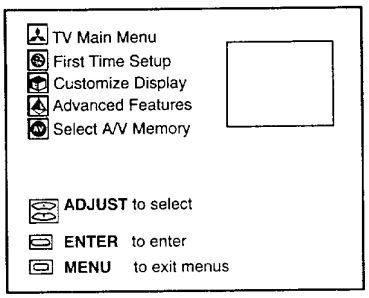
The four memory positions are:

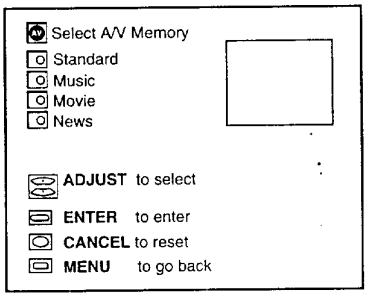
"**Standard**" - - - normal picture and sound

"**Music**" - - - vivid picture and lively sound

"**Movie**" - - - soft picture and strong sound

"**News**" - - - optimized for listening to speech in news programs





1. Press the MENU button on the remote control. The Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Select A/V Memory." Press ENTER.
3. You will see the "Select A/V Memory" screen.
4. Use the ADJUST buttons to select the desired A/V Memory position.

   You can press the CANCEL button to reset many of the audio and video settings for the selected A/V memory position to their factory settings. Pressing CANCEL will not affect changes made to volume, the "Listen to:" function (Stereo/ SAP/Mono), speaker (off/on), and closed captioning.

5. Press the MENU button to return to the MAIN MENU.

Models CS-32309 and CK-32310 only -- You can also select the A/V memory position by pressing the A/V MEMORY button on the front panel.

▷**Important:** A/V Memory positions are specific to the currently selected input. When you change your input, the last A/V memory position used with that input is automatically selected. See "Selecting the input source" in this chapter for information on choosing your input.

Selecting the A/V Memory position

Although the preset A/V Memory positions are designed to optimize the picture and sound quality for different types of programming, you can adjust individual settings (tint, treble, etc.) for any position. See "Customizing the A/V memory position" starting on the next page for information on adjusting individual video and audio settings.

▷**Important:** Closed captioning adjustment is independent of A/V memory positions.

▷**Important:** The "Select A/V Memory" menu is not available after you lock channels.

Customizing the A/V Memory position

You can adjust the individual video and audio settings for each of the four preset A/V memory positions to your desired picture and sound qualities. This section provides descriptions of each video and audio setting, and explains how to adjust them for the A/V memory positions. See "Selecting the A/V Memory position" in this chapter for more information.

▷**Important:** You can cancel any adjustments made to an A/V Memory position and return it to the factory settings. See "Selecting the A/V memory position" in this chapter for more information.

Adjusting the picture

This section contains descriptions for each video setting and explains how to adjust them for the A/V Memory positions.

descriptions of video functions

TINT provides a scale that adjusts the proportion of red to green in the picture. This determines the delicate tones of color.

COLOR provides a scale that determines the intensity of the color.

CONTRAST provides a scale that controls the level of white-to-black in the picture. When the contrast is low, you will be able to see the variety of shades in the darker images on the screen. When the contrast is high, the screen's dark images will appear more uniformly black, but this will also make the colors on the screen seem more vibrant.

BRIGHTNESS provides a scale that controls the overall brightness of the picture.

SHARPNESS provides a scale that adjusts the detail and clarity of the picture.

NOTCH FILTER is used in special cases to stabilize the color of striped or checked patterns.

COLOR TEMP (**Color temperature**) allows you to set how the TV will display white images. Your choices are "Low," "High," or "Middle."

- With the "Low" setting, white images on-screen will have a warm cast to them.
- With the "High" setting, white images on-screen will have a cool cast to them. This setting may be the most realistic picture under bright lighting.
- With the "Middle" setting, white images on-screen will be balanced between the above warm and cool settings.

Customizing the A/V Memory position (cont.)

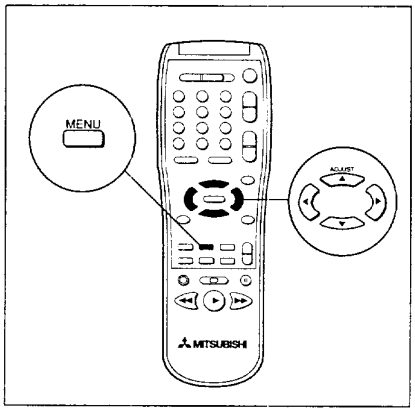
SKIN-TONE adds warmth and red tones to the picture.

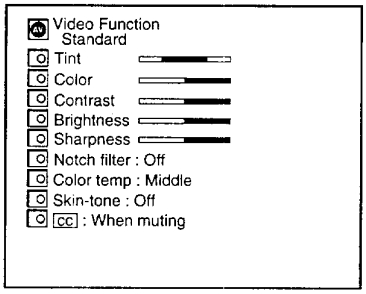
CC is used to control the closed caption decoder. For details, see "Using the closed caption decoder" in this chapter.

adjusting the video functions

You can adjust the video settings for any A/V memory position using the MENU or VIDEO buttons on the remote control. You can adjust the CC function only by using the MENU button.

access with the MENU button





❶ Press the MENU button on the remote control. The TV Main Menu appears on the screen.

❷ Use the ADJUST buttons to select "Select A/V Memory." Press ENTER.

❸ The four A/V memory positions appear. Select the A/V position to adjust by pressing the ADJUST up/down buttons. When the desired position is selected, press ENTER.

❹ The video settings for the selected A/V memory position display. Use the ADJUST up/down buttons to select the setting to change and press ENTER.

❺ The setting appears at the bottom of the screen.

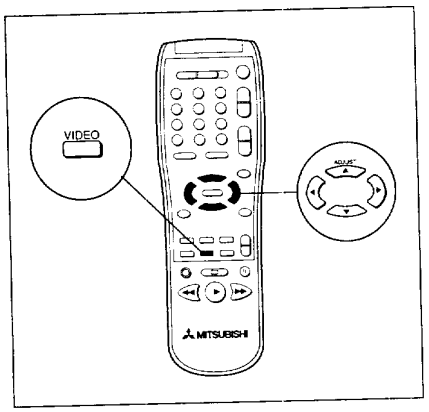
❻ While the function is still on the screen, use the ADJUST right/left buttons to adjust the function's setting.

❼ The functions will disappear from the screen after a few seconds. You cannot adjust a function if it is not on the screen.

Customizing the A/V Memory position (cont.)

access with the VIDEO button

The VIDEO button changes the video settings for *the currently selected A/V memory position.* The currently selected A/V memory position displays on the screen above the video adjustment display when you press the Video button. See "Selecting the A/V memory position" in this chapter.



1. Press the VIDEO button until the desired function displays at the bottom of the screen. You cannot select the CC function.
2. While the function is still on the screen, use the ADJUST right/ left buttons to adjust the function's setting.
3. The function will disappear from the screen after a few seconds. You cannot adjust a function if it is not on the screen.

▷**Important:** If you use the VIDEO button, any adjustments made to video functions are memorized into the currently selected A/V Memory position (Standard, Movie, Music, News). To reset the video functions to their factory settings, see "Selecting the A/V Memory" in this chapter.

▷**Important:** Pressing the ADJUST button alone in normal picture will select the previous selected video or audio function menu.

Customizing the A/V Memory position (cont.)

Using the closed caption decoder

Many broadcasters now supply closed captioning information along with their regular broadcasts. Your TV can decode that information and display it on the TV screen.

Closed captioning was initially designed so that those with hearing difficulties could more fully enjoy viewing television. However, closed captioning can also be used in other ways, such as:

- helping children learn to read
- learning a foreign language
- using the television without disturbing others

There are two types of captioning that broadcasters can send: **standard** and **text**.

Standard captioning is related to the program that is being shown. Standard captioning usually follows the dialogue of the characters on-screen.

Text captioning often contains information such as weather or news. Text captioning blocks out your view of the program you are watching.

Your TV can decode four different standard captioning signals and four different text captioning signals from each TV station. However, each station may be broadcasting only one or two captioning signals, or none at all.

When setting the decoder you can choose to:

- display one of four standard captioning signals (CC :1, CC :2, CC :3, CC :4)
- display one of four text captioning signals (CC : Text 1, CC : Text 2, CC : Text 3, CC : Text 4)
- display captions when muting (CC : When Muting)
- turn the captions off (CC : Off)

If you select " CC : When Muting," the standard captioning signal (CC :1) will appear whenever you use the MUTE button.

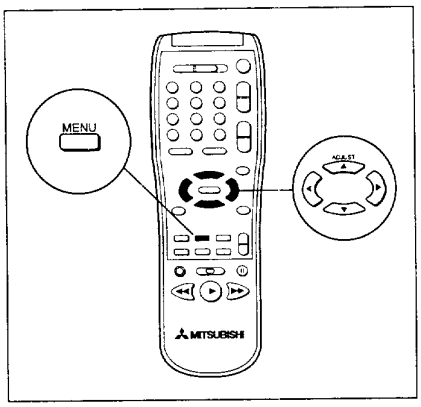
▷**Important:** If you set the decoder to a "standard" caption setting and tune to a broadcaster that is not sending a caption signal, no captions will appear.

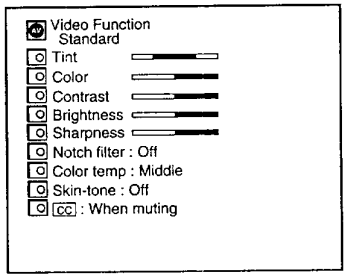
▷**Important:** The content of captions are determined by the broadcaster. If your captions show strange characters, misspellings, or odd grammar, it is not a malfunction of the TV.

Customizing the A/V Memory position (cont.)

adjusting the closed caption decoder

You can access the closed caption decoder screen using the MENU button. When adjusting the closed caption decoder, you can use the buttons on the remote control.





❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Select A/V Memory." Press ENTER.

❸ Select the closed caption display by pressing the ADJUST up/ down buttons. Press the adjust right or left button.

▷**Important:** If you set the decoder to a "text" setting and tune to a broadcast that is not sending that text signal but is sending a different "text" signal or a "standard" closed captions signal, a large black box will block your view of that channel. If you tune to a broadcast that is not sending any "text" or "standard" closed captions, your view of the channel will not be disturbed. Press HOME to make the black box disappear.

▷**Important:** If you cannot display any captions on the screen, please keep in mind that not all broadcasts, video tapes, or laserdiscs supply closed caption signals.

Additionally, captions might not appear if:

- you are playing a video tape that is worn or deteriorated
- you are starting to play a laserdisc from still or search mode

Customizing the A/V Memory position (cont.)

Adjusting the sound

This section contains descriptions for each audio setting and explains how to adjust them for the A/V memory positions.

descriptions of audio functions

LISTEN TO allows you to determine how your TV will receive an audio signal and play back the sound that you hear. You can set this function to "Stereo," "S.A.P.," and "Mono."

- For almost all situations, you should choose **Stereo**. With this setting, the TV will play stereo broadcasts in stereo and mono broadcasts in mono. If a channel is broadcasting in stereo, the word "Stereo" will display when you tune to that channel.
- Some TV stations will broadcast second audio program, or S.A.P. signal. This signal is an additional soundtrack that you can't hear during normal TV viewing. An S.A.P. signal might be related to the program you are watching, such as a soundtrack in a foreign language, or it might be unrelated, such as a weather report. If a channel is broadcasting an S.A.P. signal, the letters "SAP" will appear on-screen when you tune to that channel. Choose "Listen to: SAP" to hear the S.A.P. signal.
- Use the **Mono** setting if you are receiving a weak audio signal. This setting will reduce background noise. However, with this setting, the TV will only play in mono, even if the program you are watching is in stereo.

BASS controls the volume of low frequency sound.

TREBLE controls the volume of high frequency sound.

BALANCE adjusts the level of sound between the left and right speakers. Adjust the scale until the sound seems to come equally from both speakers.

SURROUND creates simulated stereo and surround effects. You can set this function to "Off" or "On."

- Select **Off** if you do not want to use any surround effects.
- Select **On** if you are watching a stereo program; your TV will create a simulated surround effect, making the sound seem to extend around and behind you.

SPEAKER allows you to turn the TV's internal speakers on or off.

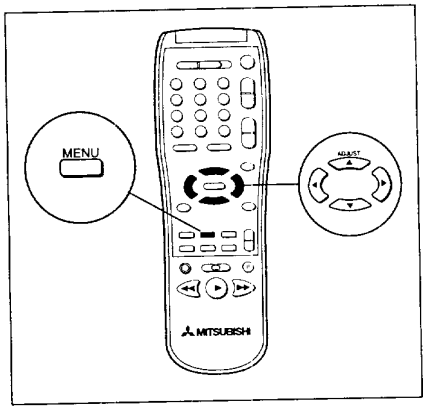
- Choose **On** if you want to play the TV's sound through the TV's built-in speakers.
- Choose **Off** if you connected an audio system to your TV and you want to play the sound of the TV through the audio system.

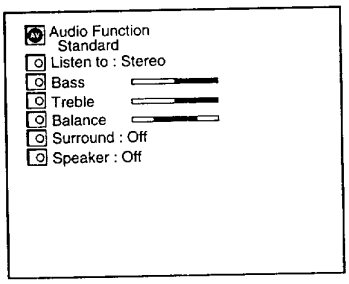
Customizing the A/V Memory position (cont.)

adjusting the audio functions

You can adjust the audio settings for any A/V Memory position using the MENU or AUDIO buttons on the remote control.

access with the MENU button





❶ Press the MENU button on the remote control. The TV Main Menu will appear on the screen.

❷ Use the ADJUST buttons to select "Select A/V Memory." Press ENTER twice to display the settings for the selected audio mode.

❸ The four A/V Memory positions appear. Select the A/V position to adjust by pressing the ADJUST up/down buttons. When the desired position is selected, press ENTER.

❹ The audio settings for the selected A/V Memory position display. Use the ADJUST up/down buttons to select the setting to change and press ENTER.

❺ The setting appears at the bottom of the screen.

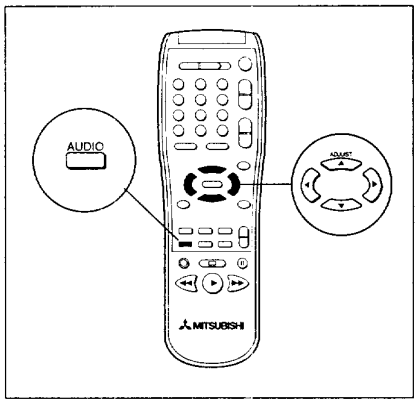
❻ While the function is still on the screen, use the ADJUST right/left buttons to adjust the function's setting.

❼ The functions will disappear from the screen after a few seconds. (You cannot adjust a function if it is not on the screen.)

Customizing the A/V Memory position (cont.)

Access with the AUDIO button

The AUDIO button changes the audio settings for *the currently selected A/V memory position.* The currently selected A/V Memory position will display on the screen above the audio adjustment display when the Audio button is pressed. (See "Selecting the A/V memory position," in this chapter.)



1. Press the AUDIO button until the desired function displays on the bottom of the screen.
2. While the function is still on the screen, use the ADJUST right/ left buttons to adjust the function's setting.
3. The functions will disappear from the screen after a few seconds. (You cannot adjust a function if it is not on the screen.)

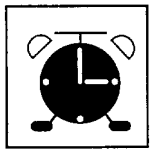
▷**Important:** If you use the AUDIO button, any adjustments made to audio functions are memorized into the currently selected A/V Memory position (Standard, Movie, Music, News). To reset the audio functions to their factory settings, see "Selecting the A/V Memory" in this chapter.

▷**Important:** Pressing the ADJUST button alone while viewing a normal picture will select the previous selected video or audio function menu.

♦ Using the Advanced Features

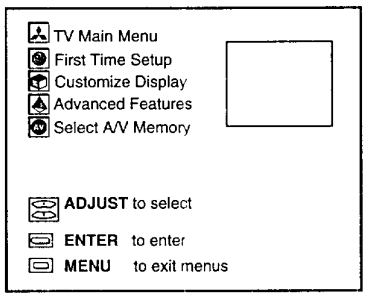
This section explains how to use some of the more advanced features. You'll learn about:

- **Setting the timer**
- **Using the parental lock**
- **Using SuperQuickView™**



Setting the timer

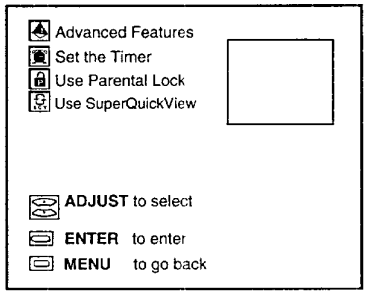
This special feature allows you to program the TV to turn on automatically at a time and channel that you set. To set the timer:



❶ Press the MENU button on the remote control. The Main Menu will appear on the screen.

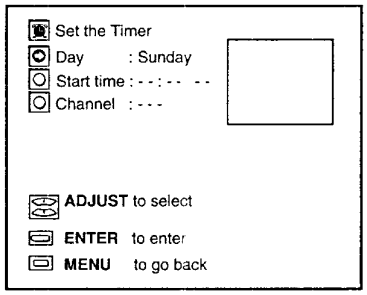
❷ Use the ADJUST buttons to select "Advanced Features." Press ENTER.

❸ You will see the "Advanced Features" screen. Use the ADJUST buttons to select "Set the Timer." Press ENTER.



❹ Use the ADJUST buttons and the ENTER button to set Day (Mon-to-Fri, Everyday, Sun ~ Sat), Start time, and Channel.

After setting the timer, the indicator will blink in green when the TV is turned off.



If you press the CANCEL button while setting the timer, the arrow will move to the previous item. To clear the timer, press CANCEL with the arrow next to "Day."

▷**Important:** You need to set the TV's clock first before you can set the timer. See "Setting the clock" in Chapter 3.

▷**Important:** When the timer turns the TV on, the display will flash. If you do not press any function buttons for about 5 minutes, the TV will automatically turn off. Press a function button (such as the INFO button) to keep the TV on and turn off the flashing display.

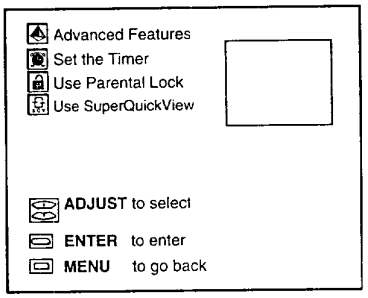
Using the parental lock

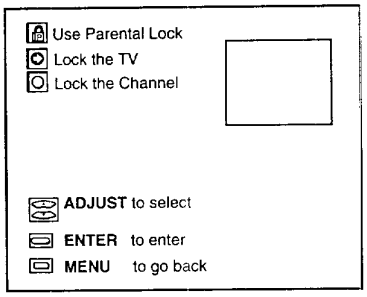
This special feature allows you to lock the entire TV during a certain time period or lock up to ten individual channels. (You cannot lock the TV and lock individual channels at the same time.) When you turn on the lock, you enter a 4-digit secret code that will allow you to turn off the lock later.

If you try to turn on a locked TV, view a locked channel, or the locking "time period" begins, you will see a message asking you to enter the secret code. If you don't enter the code within five minutes, the TV will turn off or tune to an unlocked channel.

If you enter the secret code, the message will disappear and the lock will be turned off temporarily. However, the TV or channels will be locked again after you turn off the TV. This will continue until you turn the lock off permanently. To turn the lock off permanently, follow the procedure later in this section.

using parental lock





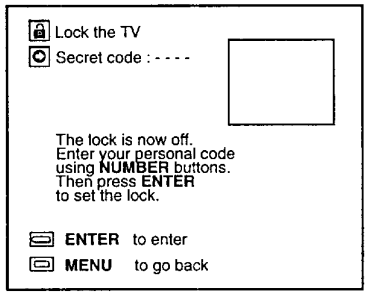
1. Press the MENU button. The Main Menu will appear.
2. Use the ADJUST buttons to select "Advanced Features." Press ENTER.
3. Use the ADJUST buttons to select "Use Parental Lock." Press ENTER.
4. Use the ADJUST buttons to select "Lock the TV" or "Lock the Channel." Press ENTER.

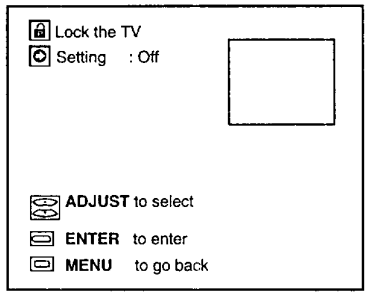
   If you selected "Lock the TV," see page 74.

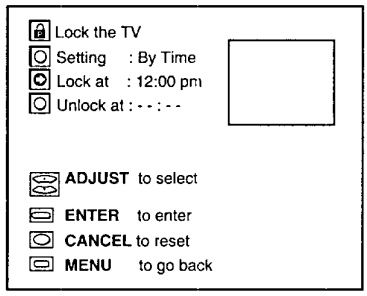
   If you selected "Lock the Channel," see page 75.

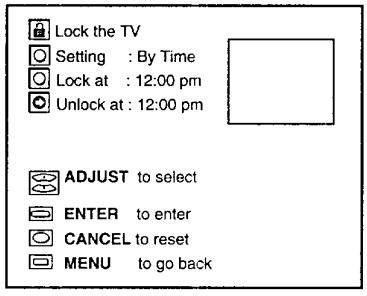
▷**Important:** If you turn the parental TV lock on, you cannot use the timer.

Using the parental lock (cont.)


Lock the TV
Secret code : - - - -
The lock is now off.
Enter your personal code
using NUMBER buttons.
Then press ENTER
to set the lock.
ENTER to enter
MENU to go back







locking the TV

❶ The message for locking the TV will appear.

❷ Enter a four-digit secret code using the number buttons (0-9); then, press the ENTER button.

You can cancel the code if you press CANCEL before you press ENTER.

❸ Use the ADJUST buttons to select a setting: Off, Always On, or By Time. Press ENTER.

If you select the setting: "By Time"

❶ The cursor will move to "Lock at." Use the ADJUST buttons to set the time at which you want to lock the TV. Press ENTER.

❷ Use the ADJUST buttons to set the time at which you want to unlock the TV. Press ENTER; the screen will return to the "Advanced Features" menu.

If you set the "Lock at:" and the "Unlock at:" times to the same time, the lock will be in effect all the time. This is the same as if you had chosen "Always on" in step ❸ above.

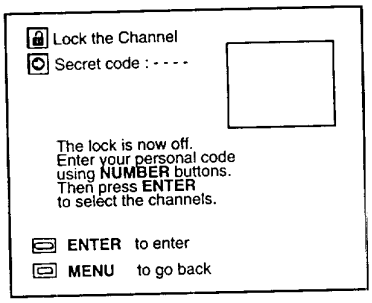
❸ Press HOME to exit the menus.

❹ When you turn on a locked TV, or if the lock's "time period" begins, you will be asked to enter your four-digit secret code. Enter the code to temporarily disable the lock. The lock will be enabled again when you turn the TV off.

▷**Important:** The TV will be locked at all times if you set the lock by time but do not set the TV's clock.

Using the parental lock (cont.)

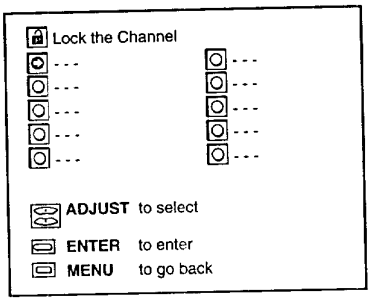
locking the channel


Lock the Channel
Secret code : - - - -
The lock is now off.
Enter your personal code
using NUMBER buttons.
Then press ENTER
to select the channels.
ENTER to enter
MENU to go back

❶ The message for locking a channel will appear.

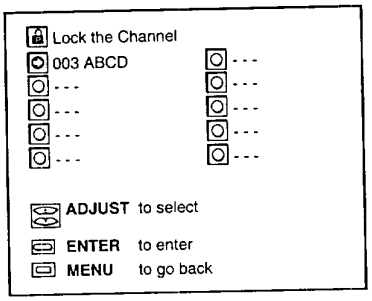
❷ Enter a four-digit secret code using the number buttons (0-9); press ENTER.

You can cancel the code if you press CANCEL before you press ENTER.



❸ You will see the channel lock set up screen. Use the ADJUST buttons to select a position. Press ENTER.

❹ Use the ADJUST buttons or CHANNEL buttons to choose the channel you want to lock. Press ENTER.



❺ Repeat the steps above to lock additional channels. When you are finished, press the HOME button to turn off the menus.

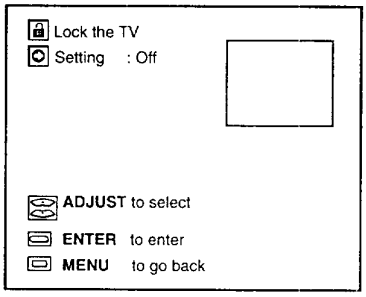
❻ When you try to view a locked channel, you will be asked to enter your four-digit secret code. Enter the code to temporarily disable the lock. The lock will be enabled again when you turn the TV off.

Using the parental lock (cont.)

canceling or changing parental lock

1. Press the MENU button. The Main Menu will appear on the screen.
2. Select "Advanced Features" using the ADJUST buttons; press ENTER.
3. Select "Use Parental Lock" using the ADJUST buttons; press ENTER.
4. Enter the four digits of your secret code using the number buttons (0-9); press ENTER.

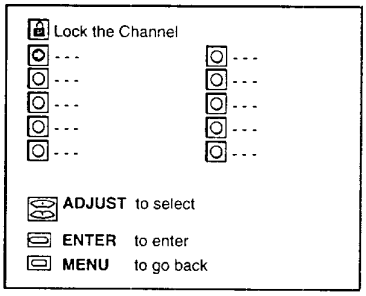
You will see this screen if you locked the TV.



5. If you were locking the TV, use the ADJUST button to select the setting "Off" to turn off the lock.

   If you were locking the channel, use the ADJUST buttons to place the cursor next to the channel whose lock you want to cancel. Press ENTER.

You will see this screen if you locked the channel.

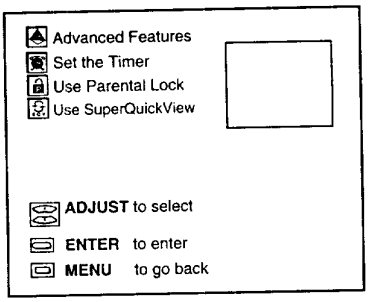


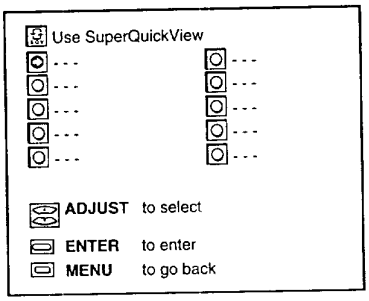
6. Press the CANCEL button to unlock that channel, or use the ADJUST buttons to change the channel to a new one.
7. Press the MENU button to return to the "Advanced Features" menu.

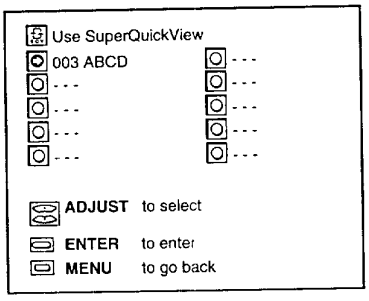
▷**Important:** If you forget your four-digit secret code, please see the Appendix.

Using SuperQuickView™

SuperQuickView allows you to cycle through a list of up to ten numbers with the SQV button. Use the menus to add channels to the list or to remove channels from the list. You can also add channels directly to the list using only the remote control's SQV button.







customizing the Super-QuickView list with the menus

1. Press the MENU button on the remote control. The Main Menu will appear on the screen.
2. Use the ADJUST buttons to select "Advanced Features." Press ENTER.
3. Use the ADJUST buttons to select "Use SuperQuickView." Press ENTER.
4. Use the ADJUST buttons to select a position in the list; press ENTER.
5. Use the ADJUST buttons, CHANNEL buttons or number buttons to add a channel to the list; press ENTER. You can clear a channel by pressing the CANCEL button.
6. Repeat steps 4 and 5 to customize the SuperQuickView memory.
7. Press the MENU button to exit this menu.

Using SuperQuickView™ (cont.)

adding channels directly to the list with the remote control's SQV button

1. Use the channel controls or number buttons to tune the TV to the channel you want to add to the list.
2. Press and hold the SQV button for about 2 seconds; the letters "SQV" will appear under the channel number, indicating that the channel has been added to SuperQuickView memory in the next available position.

▷**Important:** If the SuperQuickView memory is full, the letters "SQV" will flash when you hold the SQV button for about 2 seconds. Use the steps on the preceding page to replace a current SuperQuickView channel with a new channel.

▷**Important:** Once you've added a channel to the SQV memory, the letters "SQV" appear under the channel number any time the channel number is displayed, even if you tune to the channel in another manner.

CHAPTER FOUR

Using the Special Features

In addition to the basic and advanced features explained in the previous chapter, this TV offers several special features not generally available on other brand TVs. This chapter will explain how to use these distinctive features. It contains the following topics:

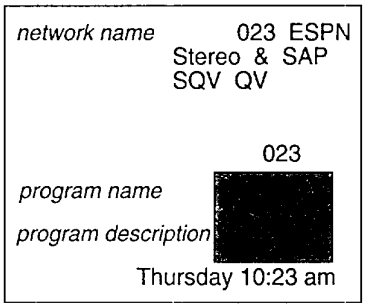
- **Understanding the On-Screen Displays**
- **Using the Sleep Timer**
- **Using the Picture-in-Picture (PIP) Modes**

♦ Understanding the On-Screen Displays

Your TV provides an on-screen summary of the current settings for the TV or cable channels, as well as the information related to Extended Data Services (XDS). XDS allows broadcasters to supply you with the current time, channel information (such as call letters and the network name), and program information (such as the program name and program description).

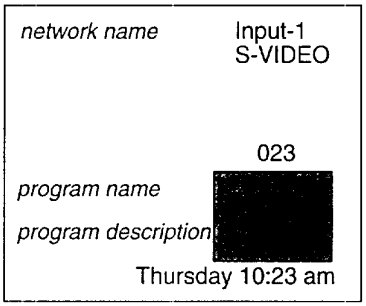
To view this information, press the INFO button on the remote control.

If the source of the main picture is an antenna:



This setting shows:
- channel number (23)
- this channel's call letters or name
- stereo and SAP are available
- this channel is programmed into SuperQuickView™ memory
- PIP input source
- current day of the week
- current time

If the source of the main picture is an input:



This setting shows:
- the input name (Input-1)
- an S-video cable is connected
- PIP input source
- current day of the week
- current time

Both displays also show where the network name, program name and program description will appear if the broadcaster is supplying the information via XDS.

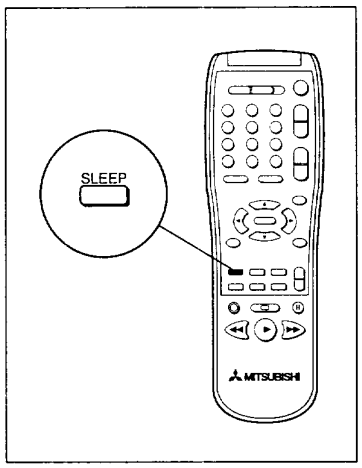
The on-screen displays will automatically disappear after about 10 seconds.

♦ Using the Sleep Timer

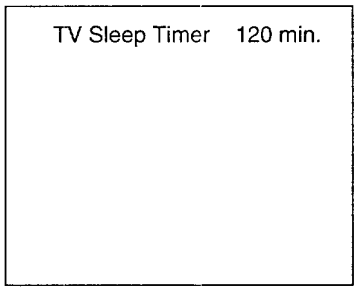
This special feature allows you to set the TV to turn off automatically. You can set the TV to turn off after a period of time ranging from 10 to 120 minutes, in ten minute intervals. In this section you will learn:

- **Setting the sleep timer**
- **Changing or canceling the sleep timer**

Setting the sleep timer



❶ Press the SLEEP button on the remote control. The sleep timer display will appear on the screen.

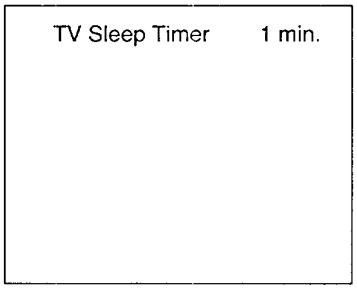


❷ Select how long you want the TV to stay on by repeatedly pressing the SLEEP button. The time will decrease in 10 minute intervals each time you press the button.

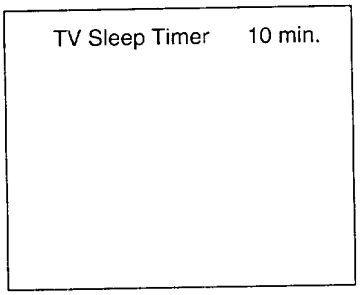
❸ When you reach the time you want, stop pressing the button. The sleep timer display will disappear after a few seconds.

❹ To view the amount of time left in the sleep timer press the SLEEP button once. The on-screen display shows the amount of time remaining.

▷**Important**: During the last minute before the TV turns off, "Sleep Timer 1 min." will flash in red to remind you that the sleep timer is set.



Changing or canceling the sleep timer



❶ Press the SLEEP button on the remote control. An on-screen display will indicate the amount of time remaining until the TV turns off.

❷ Repeatedly press the SLEEP button to change the remaining time or to cancel the sleep timer. The sleep timer is canceled when "– – –" appears instead of the remaining time.

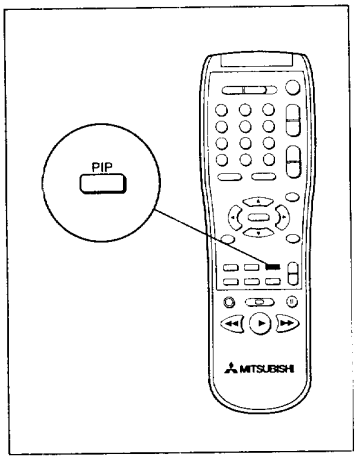
♦ Using the Picture-in-Picture (PIP) Modes

One of the special features of the TV is the picture-in-picture (PIP) mode, which allows you to view two different sources at the same time. In this section you'll learn:

- **Activating the PIP image**
- **Selecting the source of the PIP image**
- **Changing channels while using the PIP modes**
- **Exchanging the picture of the PIP image and the main image**
- **Moving the PIP image**
- **Freezing the PIP image**

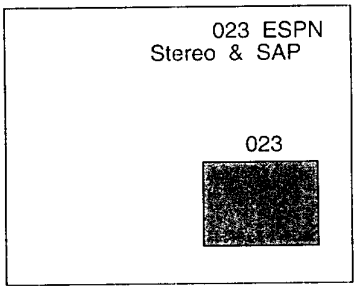
▷**Important:** You must have a VCR connected to the TV using Input 1 or Input 2 in order to see two different live action pictures when using PIP.

Activating the PIP image

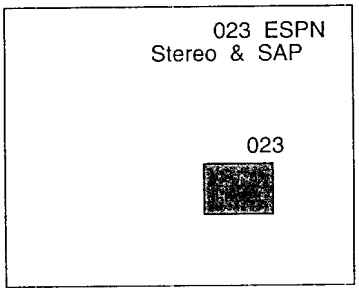


❶ Select the number of the TV channel you want to view with the channel control.

❷ Press the PIP button.



❸ A PIP image will appear in the corner of the screen.



❹ Press PIP again within 10 seconds; the PIP image will reduce to a smaller size.

(If you wait longer than 10 seconds the PIP image will disappear when you press the PIP button.)

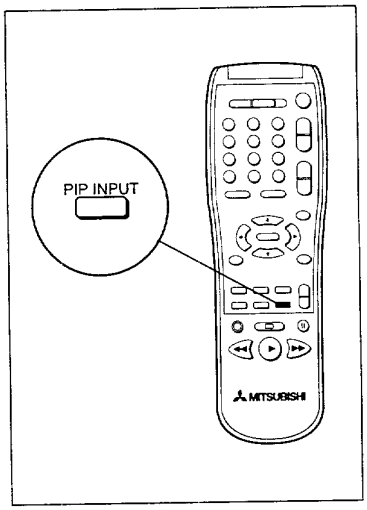
❺ Press the PIP button once again to cancel the PIP image.

▷**Important:** When the main image is black and white, the PIP image will also appear in black and white.

▷**Important:** If you move the PIP image and then turn it off, it will remain in its new position when you turn it on again.

▷**Important:** Do not press the PIP button while you are watching a channel that is not broadcasting.

Selecting source of the PIP image



1. Turn your VCR on.
2. Turn the PIP image on.
3. Press the PIP INPUT button on the remote control repeatedly until the VCR picture appears in the PIP image.
4. If you want to select a source other than the VCR, continue pressing the PIP INPUT button. The source will change as follows:

TV → INPUT-1 → INPUT-2

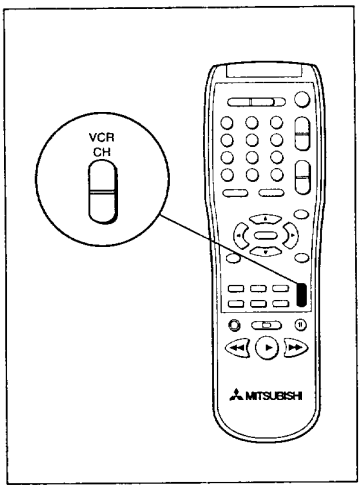
▷**Important:** To change the main image while a PIP image is displayed, press the input button (INPUT) on the control panel or on the remote control.

▷**Important:** To see two different channels at the same time, you must:

- connect a second tuning source (such as a VCR) to an input as shown in the connection diagrams in Chapter 2 of this manual
- use the PIP INPUT button to select the input for the second tuning source

Changing channels while using the PIP modes

You can use the buttons on the remote control to change the channels of both the main image and the small PIP image, as if your TV had two tuners.



To do this:

❶ Press the VCR channel button (VCR CH) on the remote control to change the channel of the PIP image.

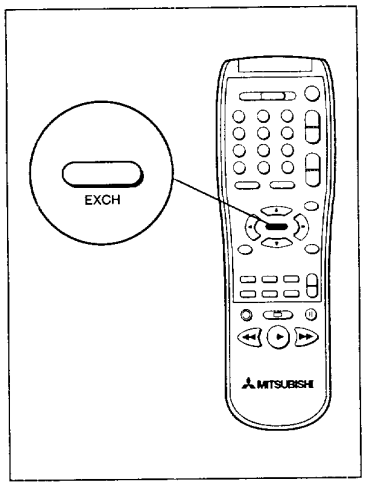
❷ Press the CHANNEL button on the remote control to change the channel of the main image.

▷**Important:** When the source of both the main image and the PIP image is the TV, the VCR channel (VCR CH) button will not change the channels of the main image or the PIP image.

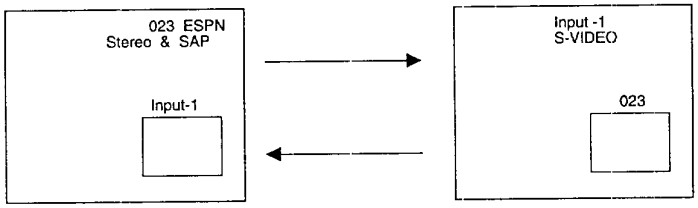
▷**Important:** You must have set up the "VCR" layer of your remote for this button to work correctly. (See "Using the remote control to operate VCRs, cable boxes and other equipment" in Chapter 3.)

▷**Important:** If you use a cable box with your VCR, do not use this button unless your VCR is able to control your cable box. Otherwise, switch the remote to the layer that controls your cable box and use the main channel buttons.

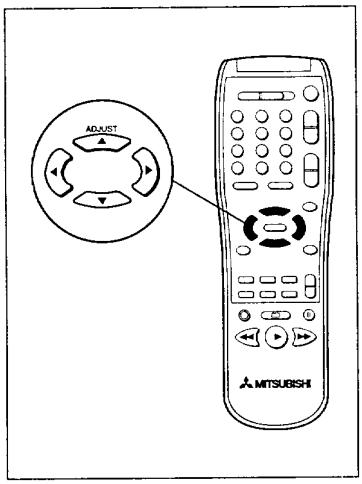
Exchanging the picture of the PIP image and the main image



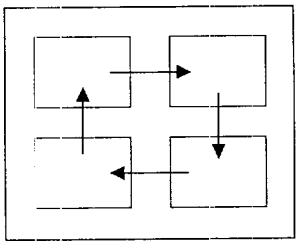
Press the EXCH button to exchange the picture of the main (background) image and the PIP image.



Moving the PIP image

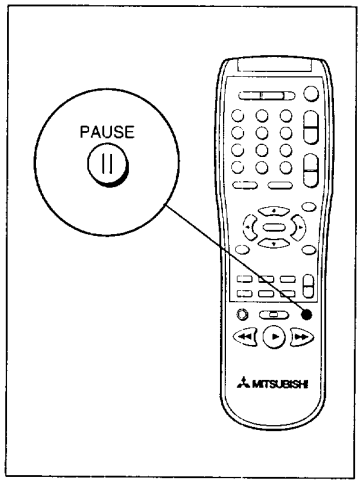


Press the ADJUST buttons to move the PIP image.



▷**Important:** If you move the PIP image and then turn it off, it will remain in its new position when you turn it on again.

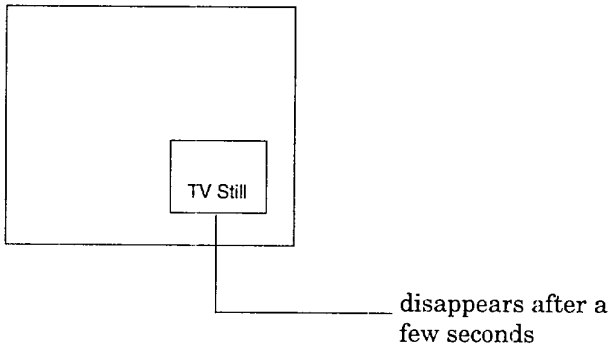
Freezing the PIP image

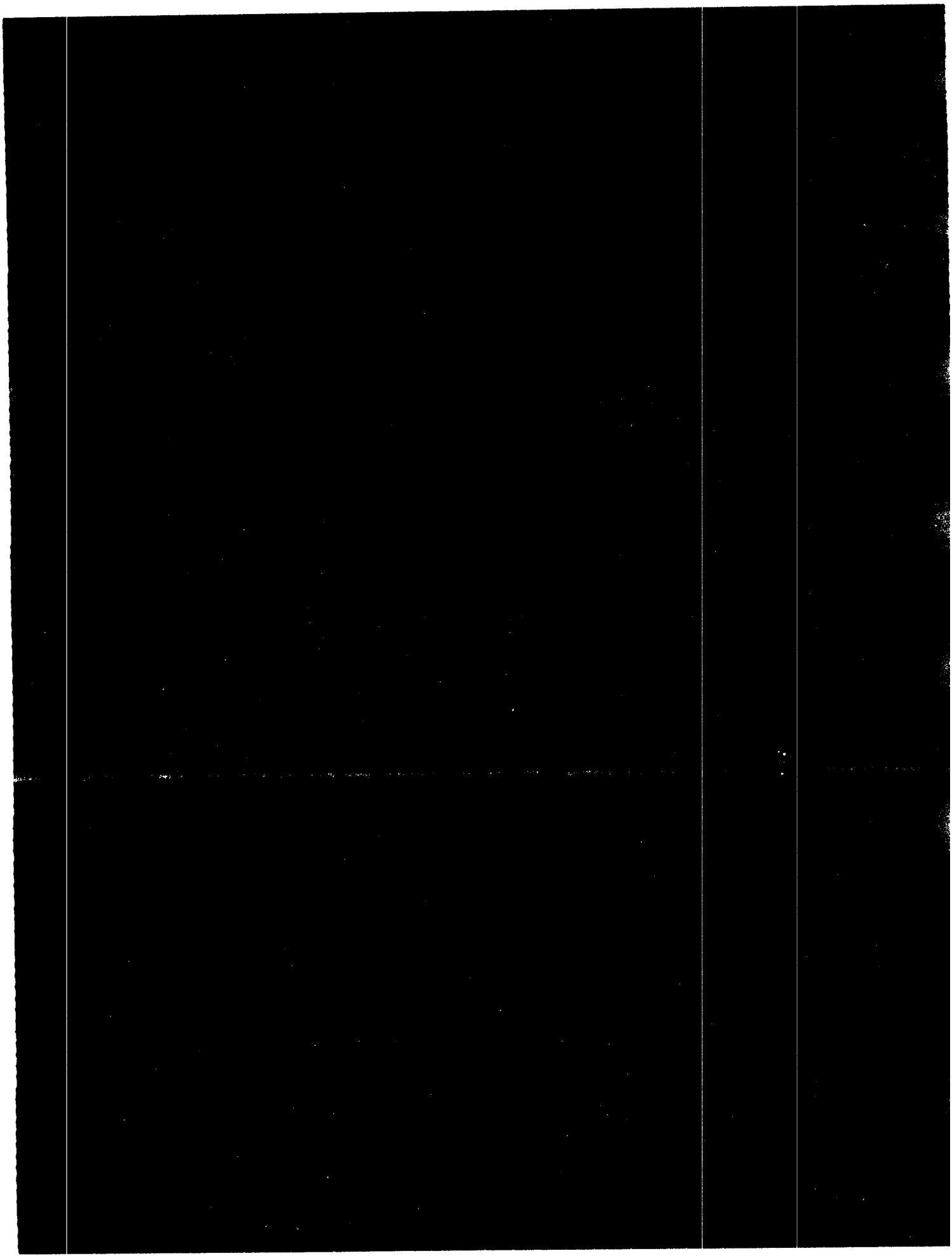


❶ Press the PAUSE button to freeze the PIP image on the screen.

❷ Press PAUSE again to return to a live picture.

▷**Important:** If you press the pause button while viewing a picture without a PIP image, a PIP image will appear and be frozen.





CHAPTER FIVE

Troubleshooting

Even though you're now familiar with the basic and advanced operations of the TV, you may run into trouble from time to time as you become accustomed to the TV. This chapter offers solutions to some of the common problems you may encounter. We suggest that you consult this chart before contacting a Mitsubishi service representative.

Troubleshooting (cont.)

Problems	Possible Solutions	For More Information
• The remote control doesn't work.	• Check that the batteries are installed correctly.	• See "Getting ready to use the remote control" in Chapter 1 for an explanation of how to install batteries.
	• Check that the select switch is set to "TV."	• See "Remote control buttons and functions" in Chapter 1, which explains where the select switch is located.
	• Be sure that you are pointing the tip of the remote control toward the TV from a distance of no more than 20 feet.	• See "Getting ready to use the remote control" in Chapter 1, which contains pointers for using the remote control.
• The TV takes several seconds to respond to button commands.	• Use the ENTER button to avoid delays.	• See "Changing channels" in Chapter 3, which explains the function of the ENTER button.
• You can't access a channel.	• Be sure that the channel you want to view is programmed into memory.	• See "Memorizing channels" in Chapter 3, which explains how to program channels into the TV's memory.
	• Check that the TV is tuned to the correct input source (antenna) for that channel.	• See "Selecting the input source" in Chapter 3, which explains how to change the input source.
• You can't see a different channel in the reduced PIP image.	• Use the PIP INPUT button to change the source of the PIP image.	• See "Using the Picture-in-Picture (PIP) Modes" in Chapter 4.
	• Make sure you have a second source, such as a VCR, turned on and connected to your TV.	
• PIP image is distorted or is not in color.	• Cycle through PIP sources by pressing PIP INPUT repeatedly.	• See "Using the Picture-in-Picture (PIP) Modes" in Chapter 4.

Troubleshooting (cont.)

Problems	Possible Solutions	For More Information
• On-screen displays appear each time you adjust a function.	• This is part of the normal operation of the TV.	• See "Understanding the On-Screen Displays" in Chapter 4 for a full explanation of the on-screen displays.
• There's no sound even when the volume is turned up.	• Check that the MUTE button isn't on.	• See "Remote control buttons and functions" in Chapter 1, which explains the MUTE button.
	• The TV's "Listen to:" setting may be set to "second audio program" (S.A.P.).	• See "Adjusting the sound" in Chapter 3, which explains the "Listen to" setting.
	• Check that the "Speaker" setting is set to "On."	• See "Adjusting the sound" in Chapter 3.
• The sound doesn't match the image on screen.	• The TV's "Listen to:" setting may be set to "second audio program" (S.A.P.).	• See "Adjusting the sound" in Chapter 3, which explains the "Listen to" setting.
• You forget the code you used to set the parental lock.	• Use the alternate procedure that doesn't require the use of the code.	• See the Appendix, "Procedure for Bypassing the Parental Lock."
• You can't program the TV to turn on automatically.	• The TV may be locked.	• See "Using the parental lock" in Chapter 3.
• There is a large black rectangle on the screen.	• The TV has been set to "text" mode, but there is no text information being broadcast.	• See "Using the closed caption decoder" in Chapter 3, or press HOME to make the rectangle disappear.
• You cannot see a picture when you play a tape in the VCR.	• If you connected your VCR with A/V cables, use the INPUT button to select the input source that the VCR is connected to.	• See "Selecting the input source" for an explanation about changing the input.

Caution and care

▶Warning: Don't leave stationary images on-screen for more than 10 minutes. These images can scar the picture tube, causing permanent damage to the TV. Some examples of stationary images are:

- stock-market reports
- station logos (especially bright ones)
- video game displays
- shopping channel displays
- the television's own on-screen displays

▷Important: If you plan to place speakers next to the TV, make sure they are magnetically shielded. Ordinary speakers will cause distortion in the picture due to their strong magnets. This distortion, however, will not harm the picture tube.

For maximum enjoyment and safe operation of your Mitsubishi Color TV, please read the "IMPORTANT SAFEGUARDS" carefully and apply them properly.

Cleaning

Normally, light dusting with a non-scratching duster will keep your TV clean.

If you want to wipe down your TV, turn it off and unplug it. Then, wipe it gently with a soft cloth slightly moistened with water. You can add a few drops of mild liquid detergent to the water for oily dirt.

DO NOT allow liquid to enter the TV through the ventilation slots.

DO NOT use strong or abrasive cleaners.

DO NOT use spray liquids or cleaners directly on the TV's surface.

DO NOT scrub or rub the TV harshly. Wipe gently.

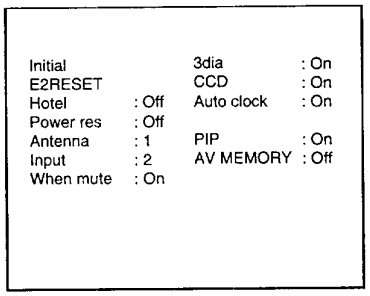
Calling for service

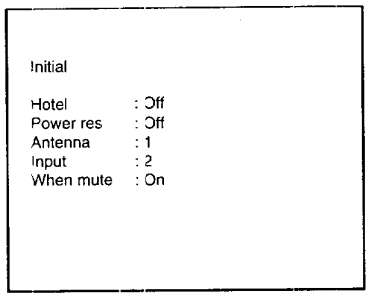
If you are unable to correct a problem with your TV, consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

DO NOT adjust any controls not described in this owner's guide.

DO NOT remove the protective back cover of this unit.

If you see one of the following displays on your screen, you should not change any settings. These are special displays used by the factory.





If these displays appear, make sure that all of the on/off settings are the same as the illustrations above and then turn the TV off. If any of the settings are different from the illustrations above, turn the TV off and consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

For further assistance, please call Mitsubishi Consumer Relations: 800-332-2119

APPENDIX

Procedure for Bypassing the Parental Lock

Cut along dotted line and file after reading.

After you set the lock, you will need the secret code in order to:

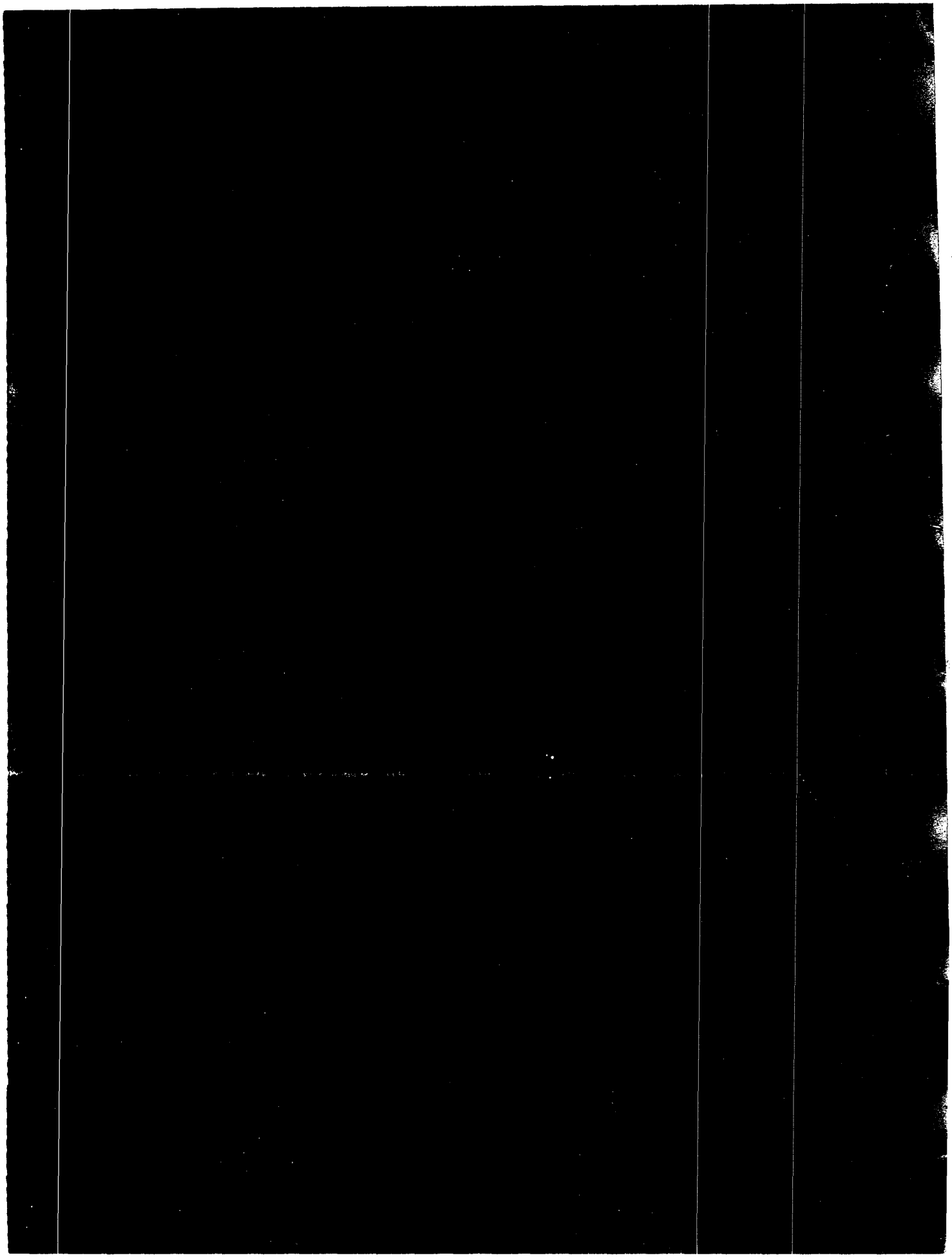
- view a locked channel
- view the locked TV
- cancel the lock

If you forget the code, you can view the locked TV without entering the code. To do this, simply press the buttons on your remote labeled "QV" and "9" at the same time whenever your secret code is requested.

▷**Important:** Unlocking with this procedure is only temporary. To cancel the lock completely, follow the procedure below:

1. Turn on your TV. If the TV requests your secret code, press the "QV" button and the "9" button on the remote control at the same time.
2. Press the MENU button to view the main menu. Use the ADJUST button to select "Advanced Features." Press ENTER.
3. Use the ADJUST button to select "Use Parental Lock." Press ENTER.
4. Press the "QV" button and the "9" button on the remote control at the same time, instead of entering the code.
5. If you were using "Lock the TV," select a setting "Off" using the ADJUST button to turn off the lock.
6. If you were using "Lock the Channel," use the ADJUST button to place the cursor next to the channel whose lock you want to turn off. Press ENTER.
7. Press the CANCEL button to unlock that channel, or use the ADJUST buttons to change the channel to a new one.
8. Press the MENU button to return to the "Advanced Features" menu.

▷**Important:** You must use the remote control included with this TV. You cannot use a remote control from another Mitsubishi component, and you cannot use any "Universal" remotes from other manufacturers.



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X

XDS. *See Extended Data Services*

MITSUBISHI COLOR TELEVISION OR COLOR MONITOR
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MITSUBISHI CONSUMER ELECTRONICS AMERICA, INC. ("MCEA") warrants to the original purchaser of this television or monitor if purchased from an authorized MITSUBISHI Audio/Video Dealer that, should it prove defective by reason of improper workmanship and/or material:

a. **Picture Tube.** For two years from the date of purchase at retail, we will repair or replace, at our option, any defective picture tube without charge for the tube.

b. **Other Parts.** For one year from the date of original purchase at retail, we will repair or replace, at our option, any defective part without charge for the part.

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e. **Notice.** To obtain warranty service, you must notify an authorized MITSUBISHI service center of any defect within the applicable warranty time period.

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b. Warranty service will be provided in your home or, if required, at an authorized service shop, provided that your television is located within the geographic territory customarily covered by an authorized MITSUBISHI service center. If not, you must either deliver your television to an authorized service location at your own expense, or pay for any travel and/or transportation costs the service center may charge to and from your home. Actual service labor will be provided without charge.

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